

MANUFACTURERS RECORD

Weekly Newspaper Devoted to the Industrial, Financial, Railroad,
Mining, Contracting, Engineering, Building, and General
Business Interests of the South and Southwest

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No. 25

JUN 22 1912

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Single Copy 15 Cents

Solid Platform for Southern Progress

Amid the tumults and the shoutings of party politics it is a relief to remember
The South has \$3,397,000,000 invested in manufacturing enterprises, producing annually
the value of \$3,800,000,000, and should double these figures in the near future.

The South has \$10,962,000,000 invested in agriculture, yielding \$3,000,000,000 annually,
and has uncultivated farm lands capable of yielding quite as much again.

The South is producing \$370,000,000 worth of minerals a year. It can easily produce
\$1,000,000,000 worth. Of 532,000,000,000 tons of its coal, for instance, nearly 530,000,000,000
tons are still to be mined. If it could mine as much coal as the whole world is producing, or
about 1,000,000,000 tons a year, its supply would still last 500 years. It has three-fourths of the
coking coal of the United States.

The South has 89,000 miles of railroads. It will need 250,000 miles of railroads.

With a population of 33,000,000, or 17,000,000 less than the population of the whole coun-
try in 1880, the South has more capital invested in manufacturing than the United States had
in 1880, and is producing more from its farms and mines and cutting more lumber than did the
United States 30 years ago. Individual deposits in National banks in the South are today
\$83,000,000 greater than the amount of such deposits in the National banks of the country in
1880.

These are a few planks in the solid platform for Southern progress, regardless of party
politics.

Alphabetical Index, Page 122.
Classified Index, Pages 116 to 121.
Classified Opportunities, Pages 82 and 83.

BALTIMORE, JUNE 27, 1912

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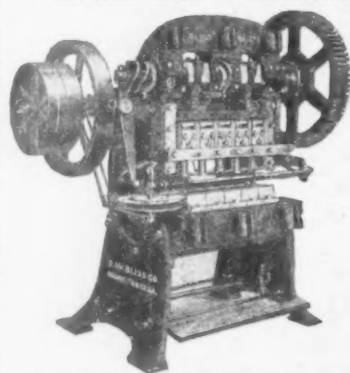
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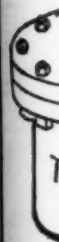
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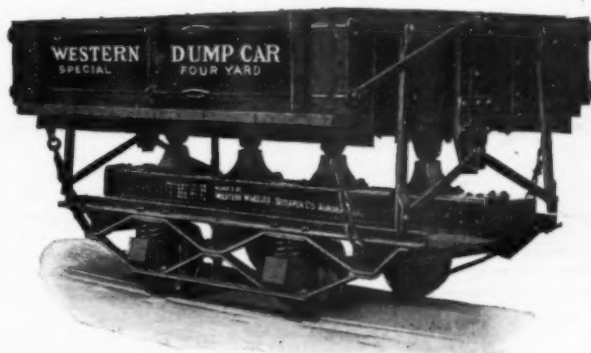
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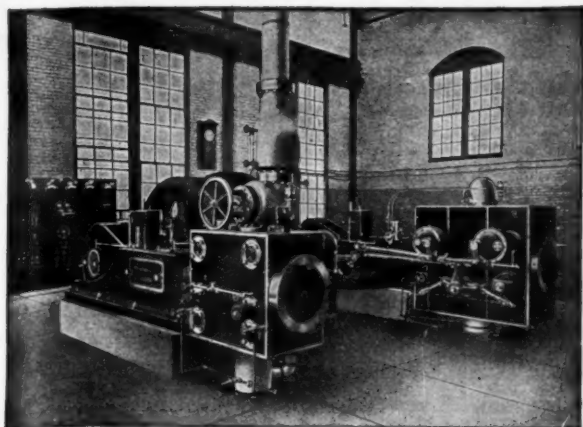


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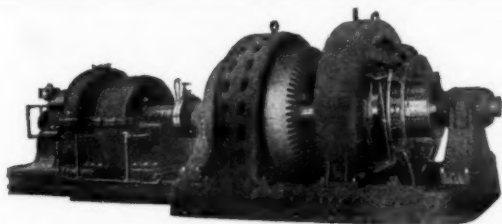
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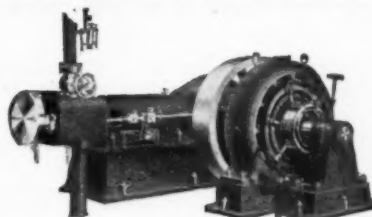
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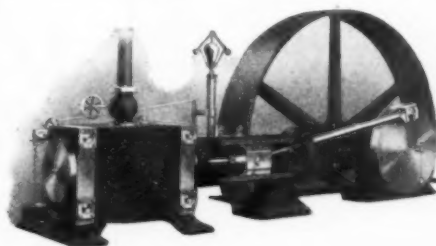
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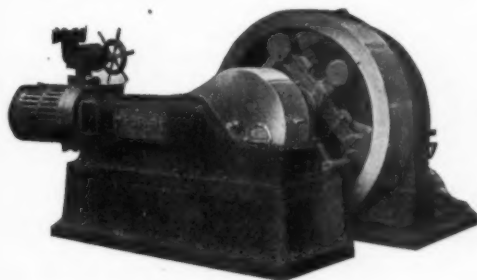
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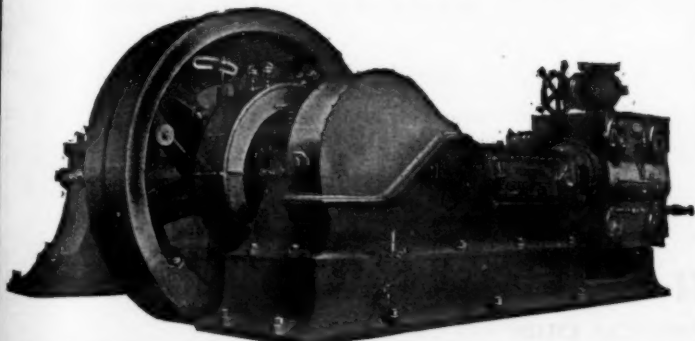
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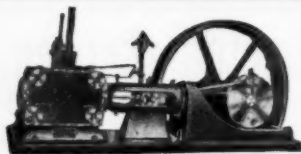
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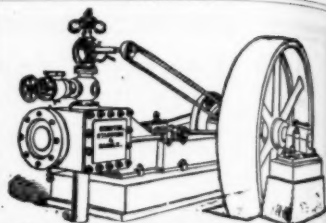


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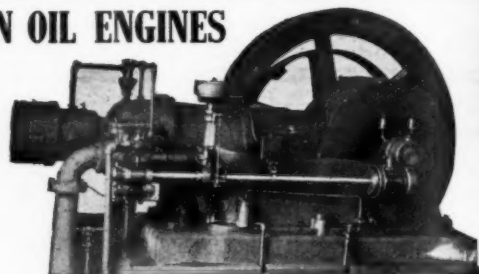
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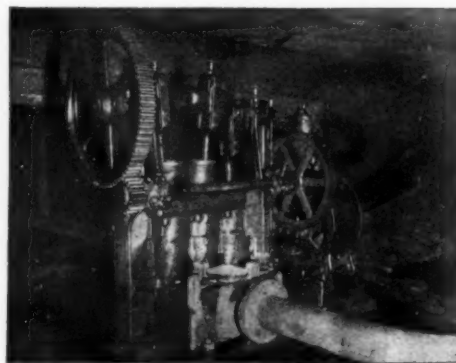
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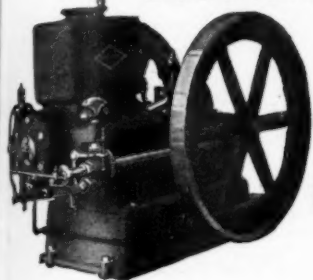
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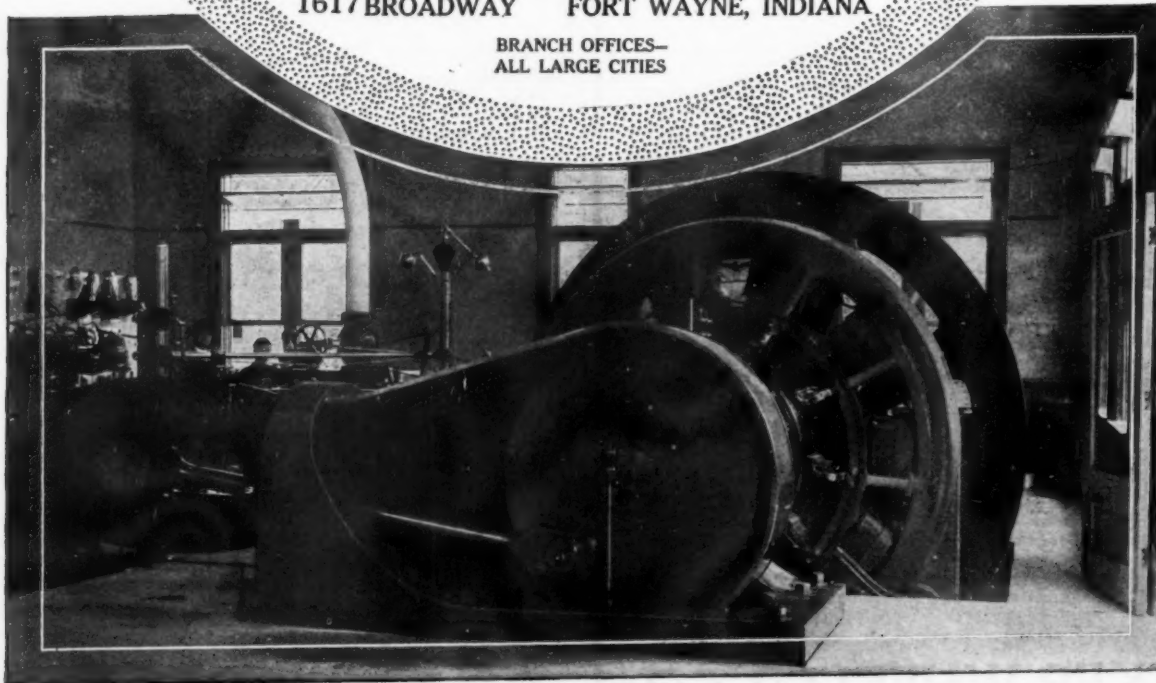
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Our System, besides being modern-priced, is thoroughly reliable. We have been making fire-alarm boxes for forty years, and our experience enables us to offer Southern towns a system that can't be surpassed.

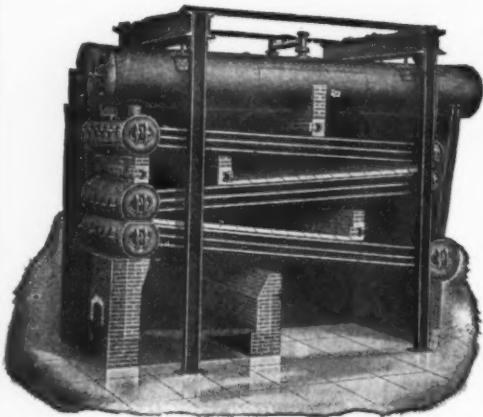
We want to confer with Southern town officials—give them names of users so they can investigate for themselves, and also go into details with them.

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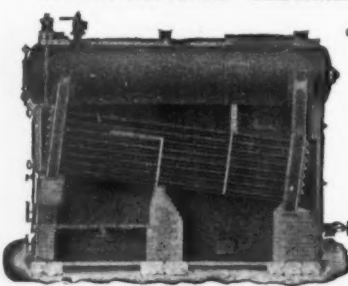
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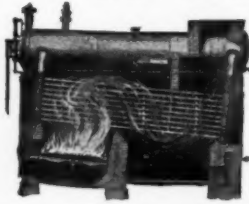
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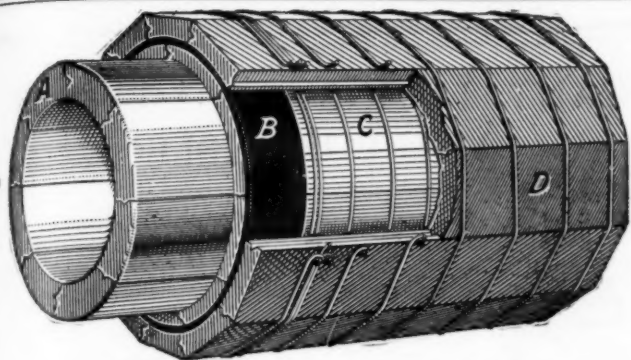
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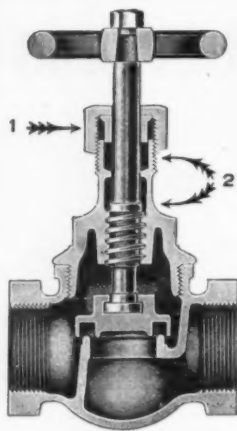
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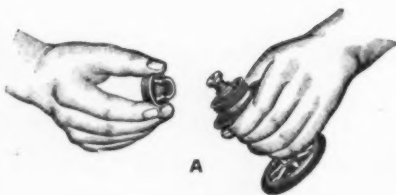
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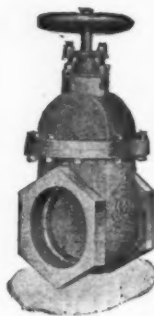


Fig. 57

in your office building, hotel,
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If so, use valves that have
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Fig. 91

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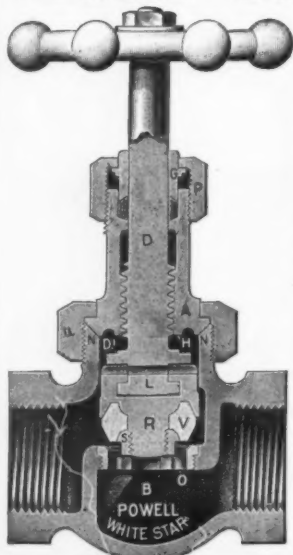
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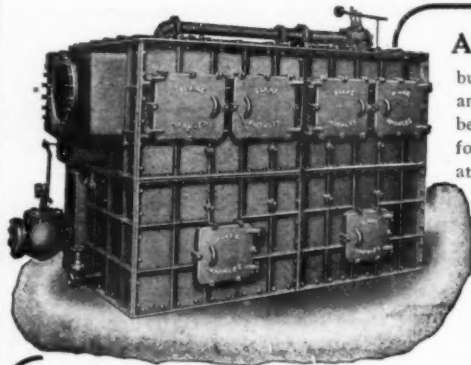
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The only thing that
increases as the size
increases, with a

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Water Heater, Oil
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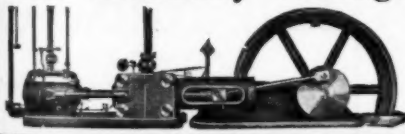
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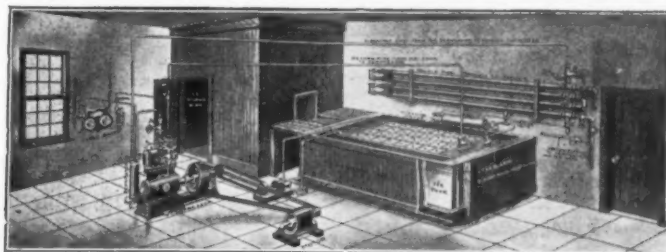
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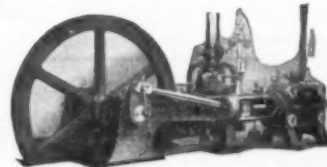
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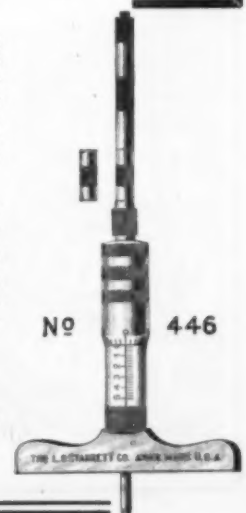
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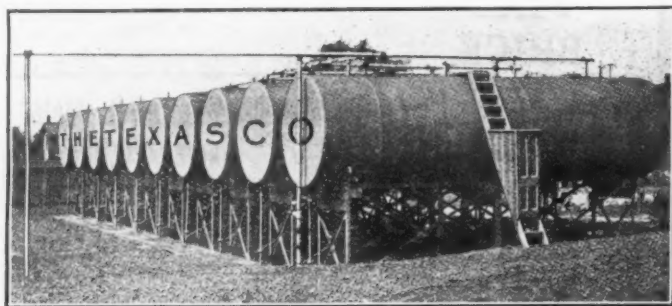
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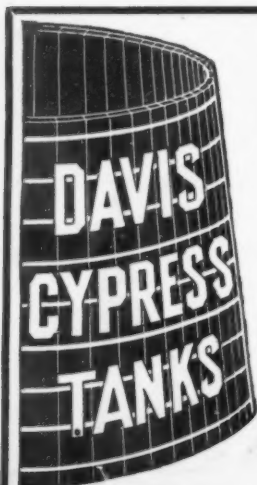
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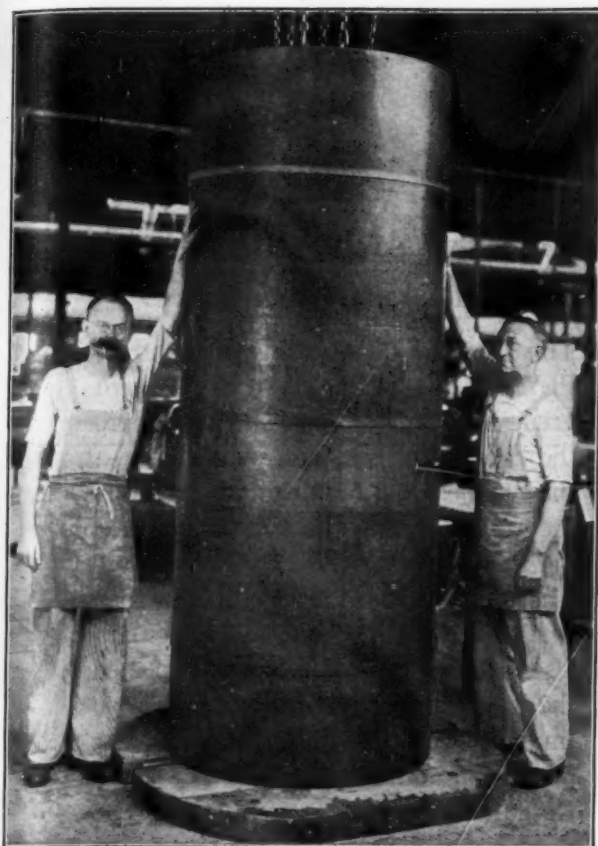


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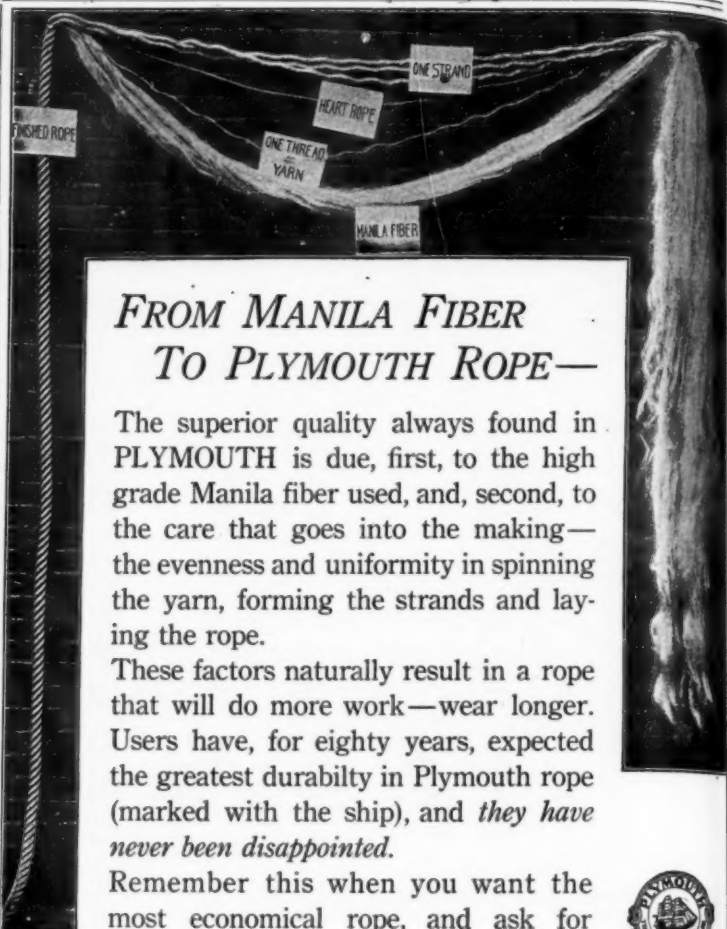
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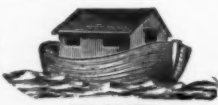
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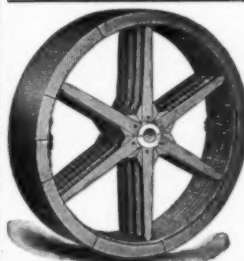
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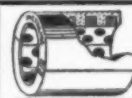
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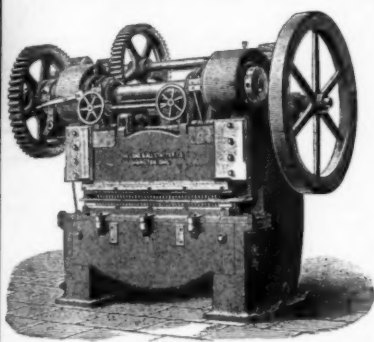
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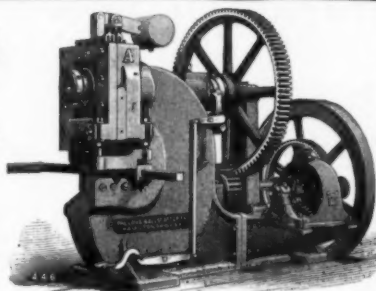
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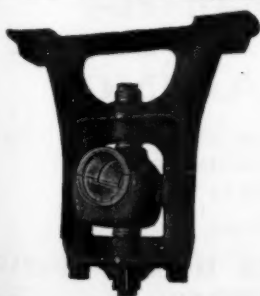
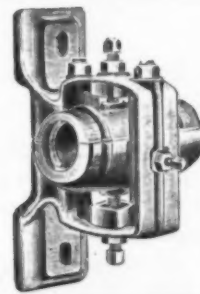
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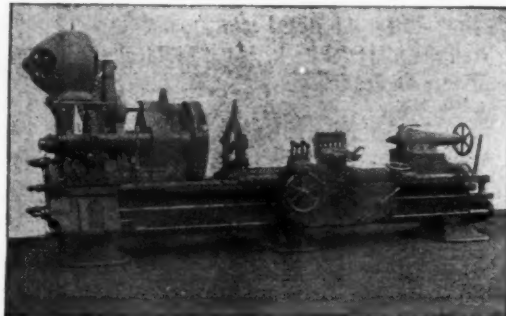


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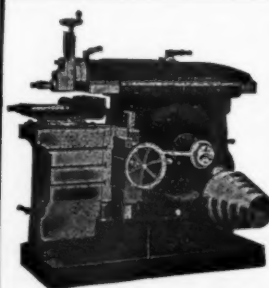


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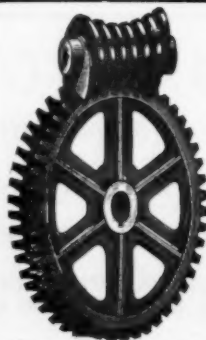
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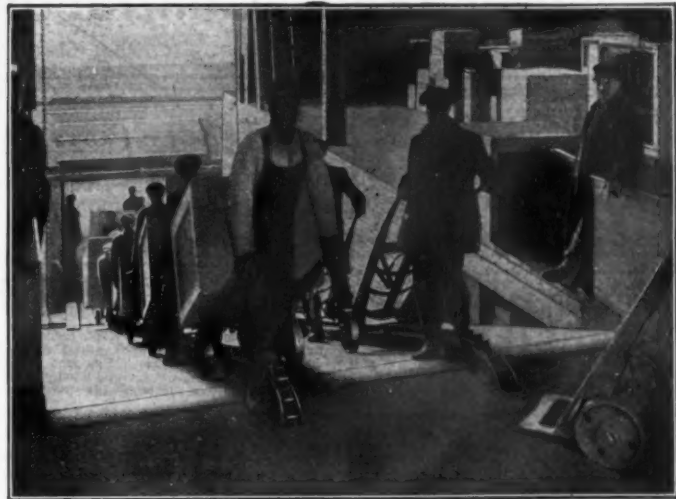
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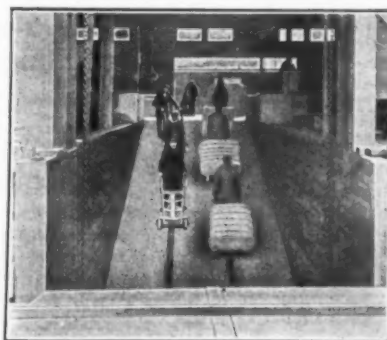
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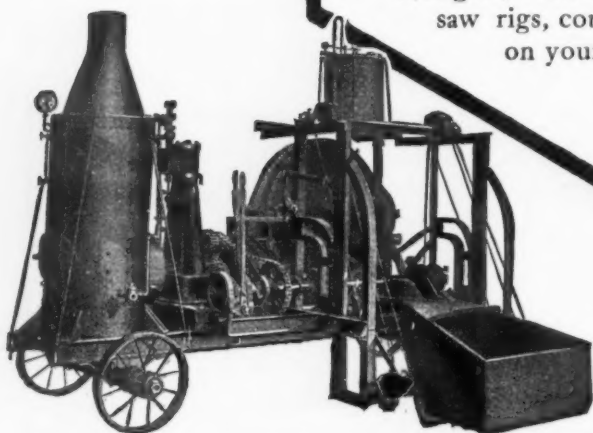
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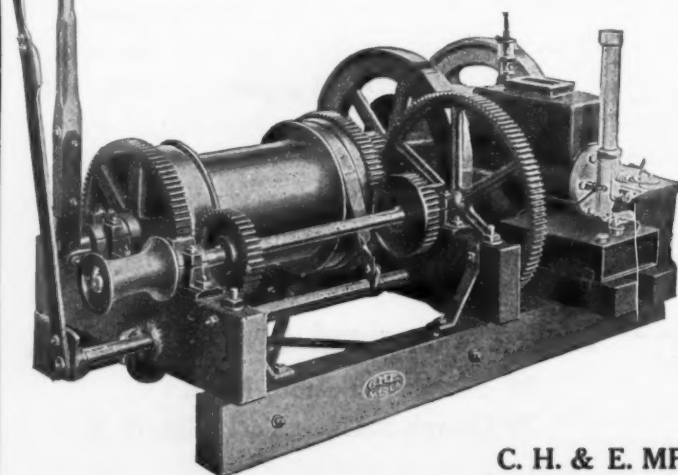
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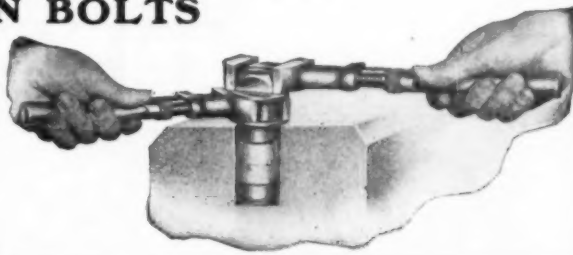
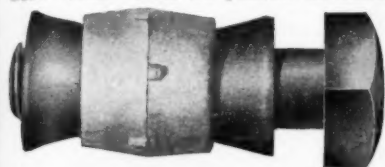
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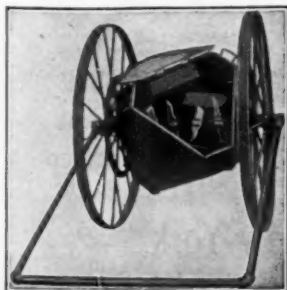
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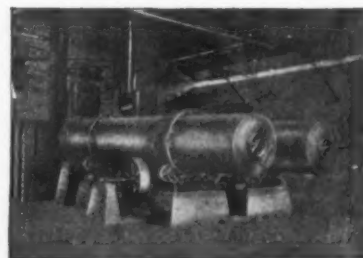
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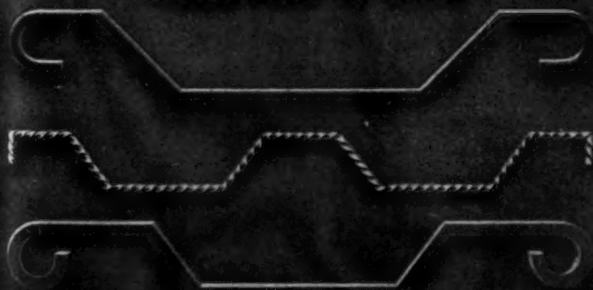
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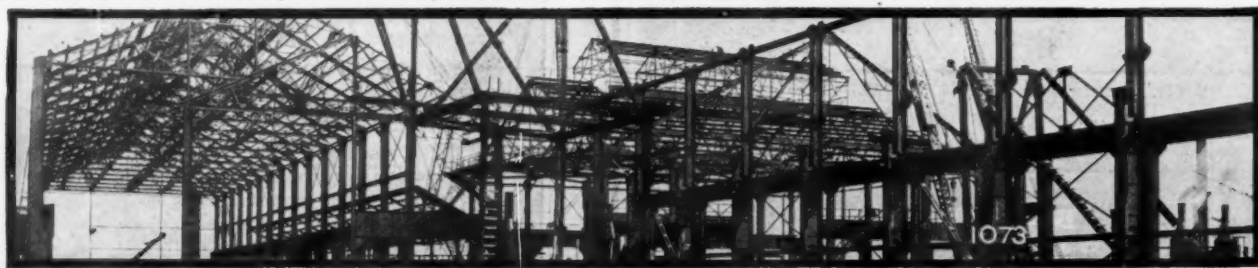
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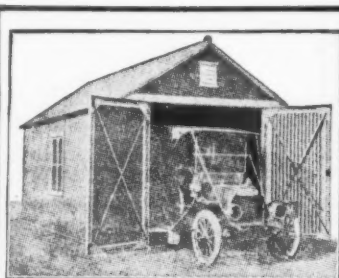
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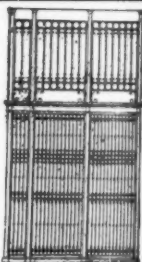
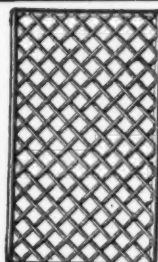
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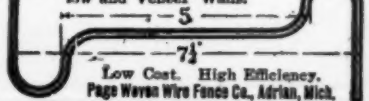
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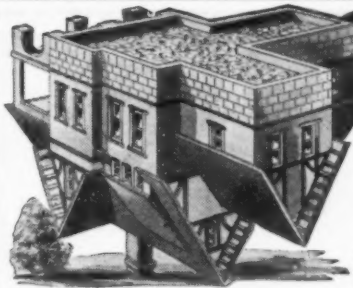
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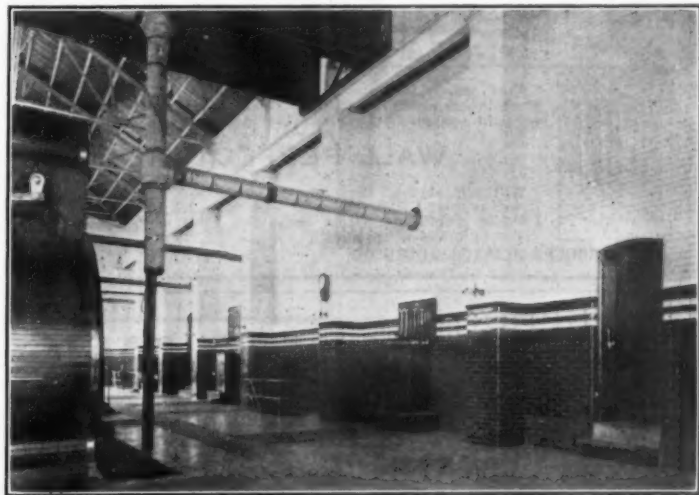
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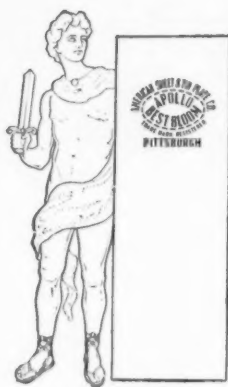
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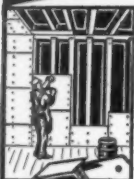
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
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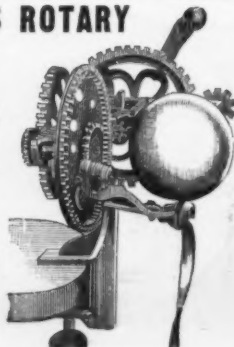
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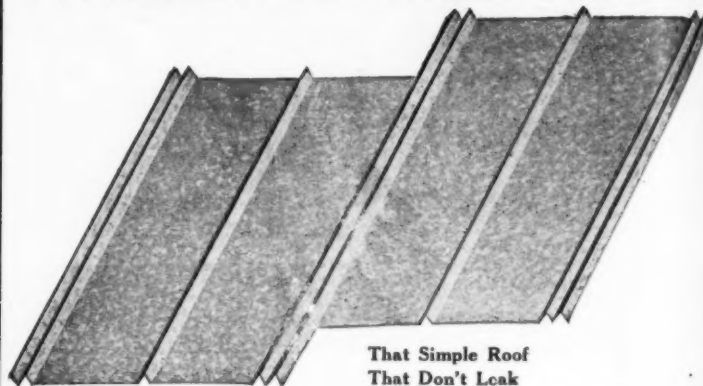
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That Simple Roof
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With Improved "Lock That Locks"
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Weigh the Dollars Against Roofing

Please remember that every dollar you spend for poor roofing is like signing a pledge to "send good money after bad," to spend additional dollars later on to keep the roof in repairs or to replace it.

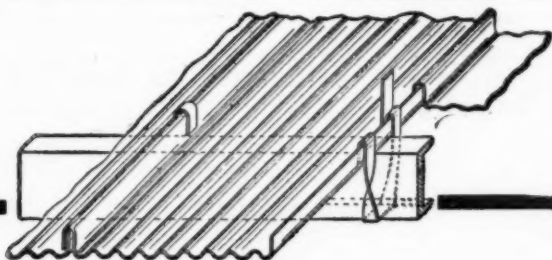
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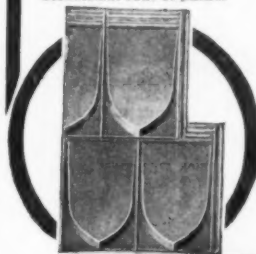
Gentlemen: Will say that I have used the Cortright Metal Shingle, and I am greatly pleased with them, especially the Victoria Shingle, with which I recently covered two churches here. The shingles are easily put on, and give an artistic appearance, and entire satisfaction, so far as weather and fireproofing is concerned. We have one roof here, W. Underwood's residence, that has been on nineteen years and today they look as well as new and give the same satisfaction.

Respectfully, JACOB FEIN, Contractor and Builder.

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or improve your property, this is one of the reasons why CORTRIGHT METAL SHINGLES are your most profitable roofing investment.

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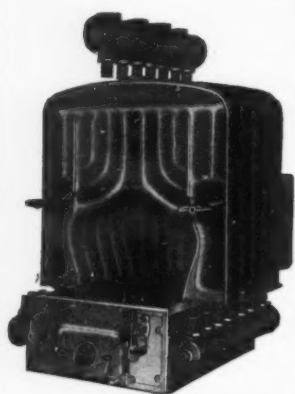
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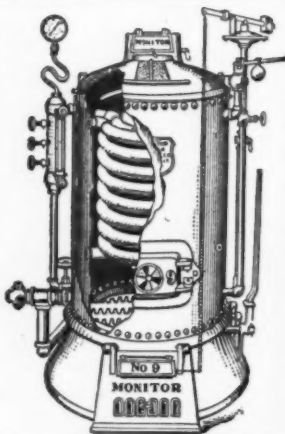
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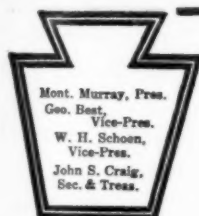
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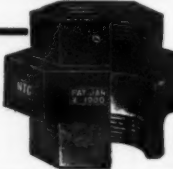


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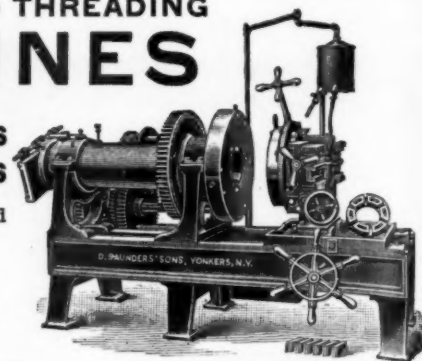
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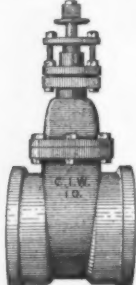
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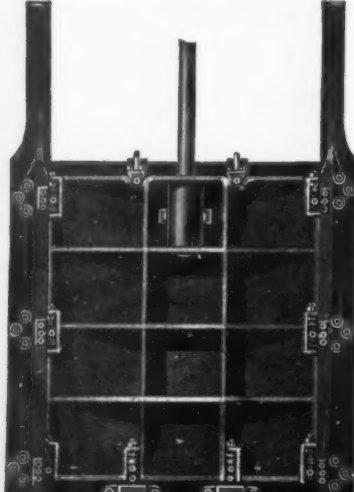


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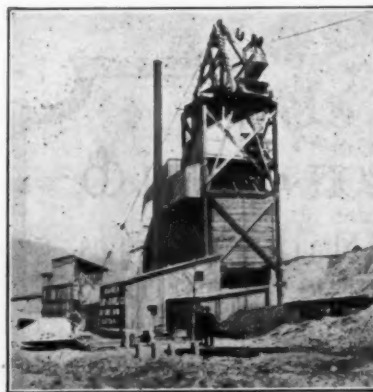
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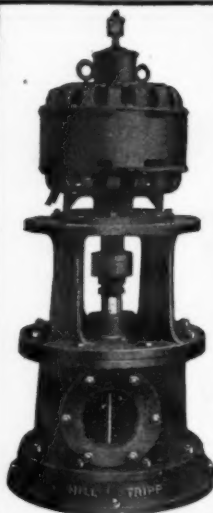
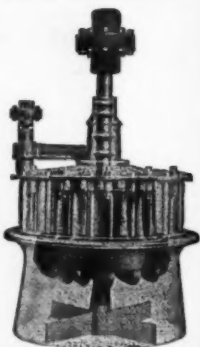
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The outfit is simplicity itself. Self-contained—the entire outfit consists of the Head (as shown) with a vertical shaft extending into the well. Impellers properly spaced throughout the entire length, and revolving rapidly, raises a solid column of water, the full size of pump casing.

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Main Office and Factory, ANDERSON, IND.

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By using the

MOFFATT PUMP

We can give you the names of hundreds of satisfied users. Electric and Power Driven Triplex and Deep Well. All sizes.

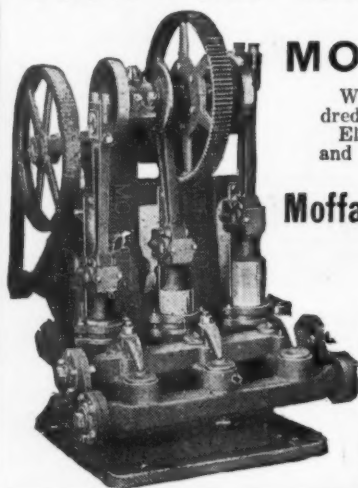
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Moffatt Machinery Mfg. Co.

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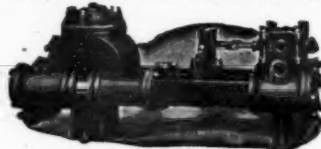
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DUPLEX PUMPS

CINCINNATI, O.



Atlantic Diaphragm Pumping Engines Conceded to Be "World Beaters"

You have read our claims; now read what they say. But don't stop there. Reading, alone, will not do. You must act. Action is the price of success. Immediately after reading the following (original on file in our office) just drop us a line for "Where the Profit Comes In" and you'll readily see why large contractors have found, and are daily finding, the Atlantic Diaphragm Pumping Engine to be "World Beaters."

C. F. Blount, Southern Sales Agent,
Harold L. Bond Co., Atlanta, Ga.

Atlanta, Ga., May 8, 1912

Dear Sir: It affords us pleasure to state that we have given your ATLANTIC DIAPHRAGM PUMPING ENGINES sufficient test to recommend them to anyone wishing an outfit of this character.

We ordered one of these outfits last January, and since then have ordered six more, using four in Atlanta and sending the others to our Superintendents on our different contracts throughout the South, and shall continue to install these equipments wherever we may have use for them, as we consider them "World Beaters," compared with any other methods we have ever used.

Yours very truly, McCRARY EXCAVATING CO.,

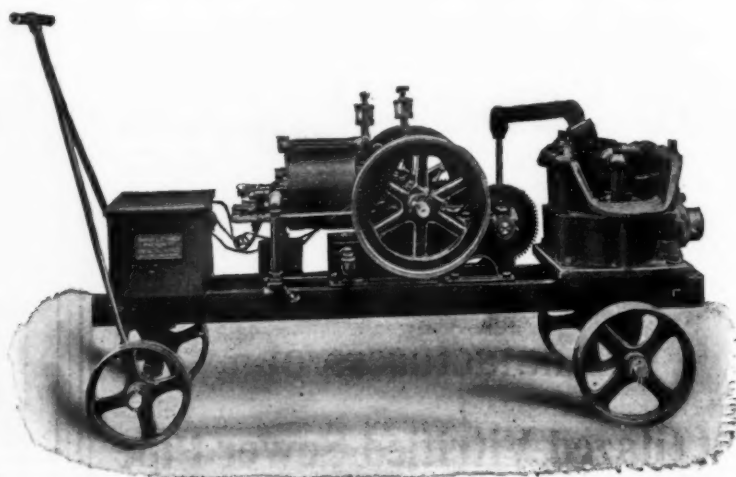
(Signed) By W. O. Lumpkin, Gen. Supt.

N. B.—You will notice we do not publish unsigned testimonials.

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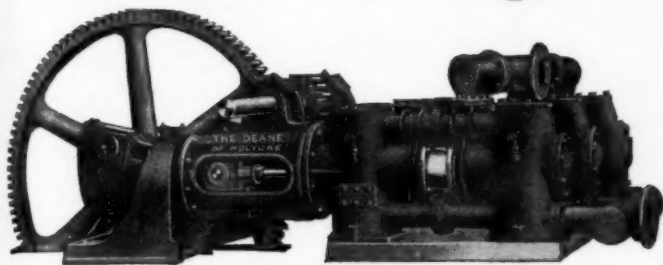
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A pump of quality for every service

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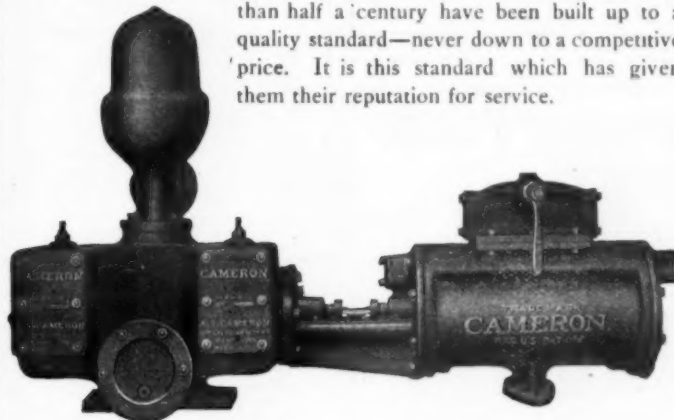
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Cameron Long Stroke Pattern Pump for Station Duty

This type of Cameron Pump is especially adapted to service where there is a long suction line with high lift, and with intermittent or continuous pumping.

Like all Cameron Pumps it is simply and durably made, to be lastingly efficient. You cannot get the service out of a cheap pump that you can get out of a Cameron.

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Complete Catalog No. 21 sent on request

A. S. Cameron Steam Pump Works

11 Broadway, NEW YORK

6-27-12

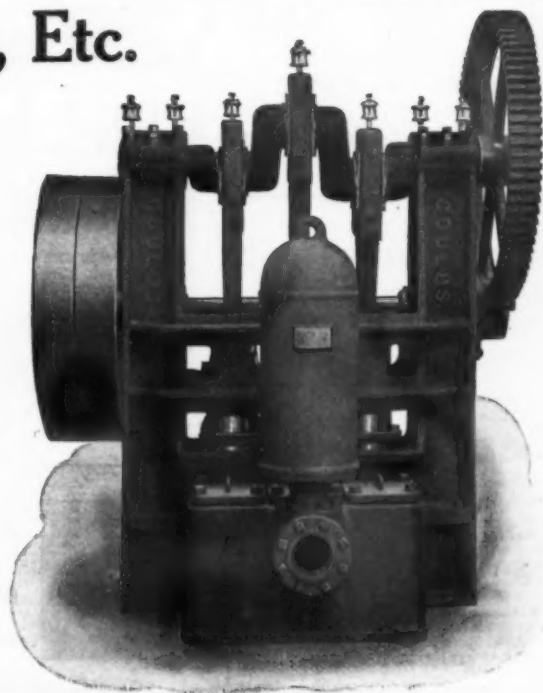
Goulds Triplex Pump, Figure 1157—for General Water Supply, Boiler Feeding, Etc.

This Pump is made in capacities ranging from 5 to 300 gallons per minute and for pressures up to 200 pounds or 460 feet elevation.

It can be equipped for any power drive and with special boiler feeding by-pass arrangement as ordered.



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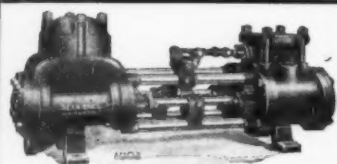


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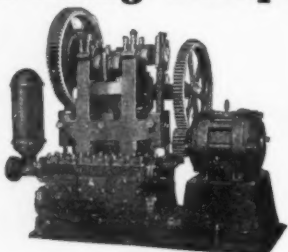
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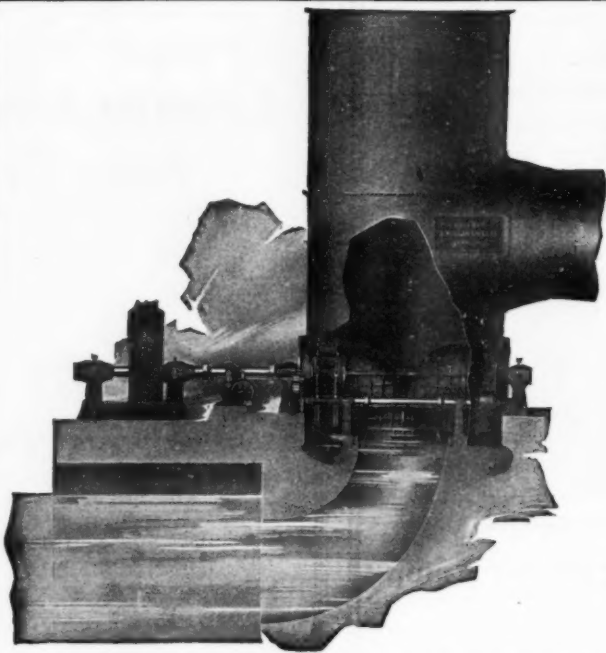
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ALL SIZES, BELT DRIVEN AND DIRECT CONNECTED

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21,600 Horse Power IN HYDRAULIC TURBINES

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Turbines built for any power or speed for heads from 5 feet to 600 feet.

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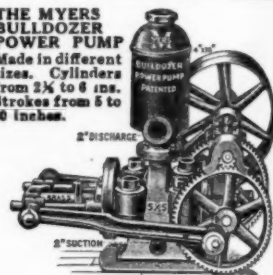
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Made in different
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WORKING HEADS, PUMPING
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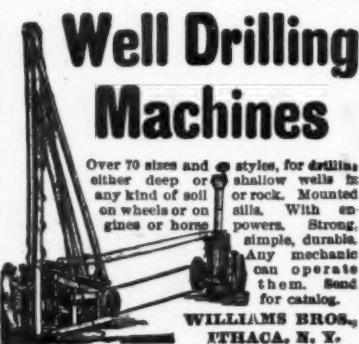
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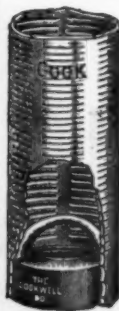
Cook's System of Wells

For Cities, Towns, Villages,
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**COOK'S DEEP WELL PUMPING
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Estimates furnished upon application.
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Ultimate Economy Demands the Hunt Noiseless Conveyor

Operation is practical at any vertical angle and with twists to horizontal angles that with other design would require *two or more* machines. Even under the severest of these conditions, material wear has never occurred in our driving mechanism, although some installations have seen *twenty-five years of service*.

Such performance is possible only through the splendid materials and workmanship which our product embodies, and the use of our patented pawl driver to abolish cumulative effects of wear at the links.

Forward movement of a Hunt Conveyor is accomplished by the pressure of pawls against studs in the chain so arranged that, whether the pawls and studs are lubricated or not, no destructive wear is possible at this point. The intermediate gears can be run entirely enclosed and in oil bath, so that the wear here is next to nothing.

Conveying machinery has been our specialty for the 40 years during which we have been the recognized leaders in our lines. Our engineers have designed, installed and supervised the operation of so many conveyors that our free advice and co-operation will prove valuable on any coal and ash handling proposition.

The cost of a Hunt Conveyor installation can be closely estimated in advance, and we are ready to refer you to abundant performance records to prove the low upkeep expense. Tell us your conditions and ask for Bulletin R 72.

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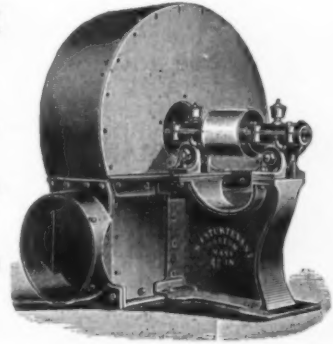
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Boston, Mass.

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Builders of Fans, Fan Systems
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Branch Offices in Principal
Cities.



758



Buffalo Sump Pump for
draining pits, etc.



Buffalo Boiler Feed Pump for
pressures up to 150 pounds.



Buffalo Class "M" Pump for
Drainage and Irrigation.



Buffalo Single Acting Triplex Pump
of 4 bearing type. For all-around
service.

Buy Your Pumps on a Service-Efficiency Basis

When you count the cost of the ordinary pump in repairs, delays and low efficiency, you will find the

Buffalo Pump

not only a wise but a necessary investment.

You can buy a Buffalo Pump to meet any kind of pumping work, and no matter what condition you buy it for it is sold on a strict efficiency-durability basis and is fully guaranteed for the service for which we recommend it.

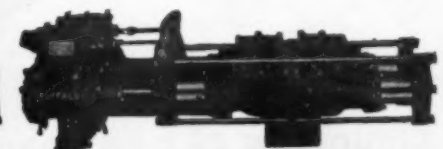
You'll find, as others have found, that Buffalo Pumps have the reliability that is essential to satisfactory service. Let us figure with you on this basis—just write the nearest house for quotations on your needs.

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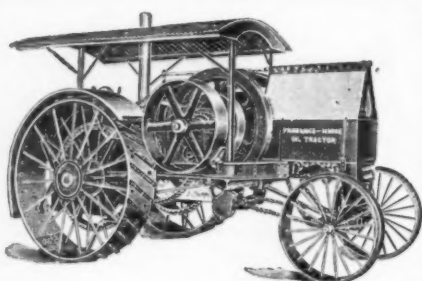
No. 227-Q, Steam Pumps No. 230-Q, Centrifugal Pumps
No. 229-Q, Power Pumps No. 231-Q, Turbine Pumps

**Buffalo Steam Pump Co.
Buffalo, N. Y.**

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Buffalo Steam Pump for high pressures for
Hydraulic Machinery, Oil Mills, etc.



[15-25 H. P. Also make 30-60 H. P.]

For Hauling, Road Grading, Rock
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Fairbanks-Morse Oil Tractors

develop more than rated
power and operate at all
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on Cheap Low Grade Oils
But they will operate
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Tractor easy to handle, simple and
reliable. All parts accessible and
protected from dirt.

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Main Office: 500 So. Wabash Ave.,
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YELLOW STRAND WIRE ROPE

See advertisement on page 98

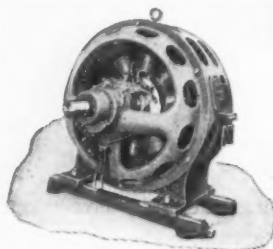
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CRINNELL AUTOMATIC SPRINKLERS

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"JUST AS GOOD"



THE ORIGINAL STEAM JET PUMP

Adapted for tanneries, creameries, R. R. water stations, etc.
Has no valves. Durable, economical, simple.
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Successors to John C. Scherer, Jr., Co.

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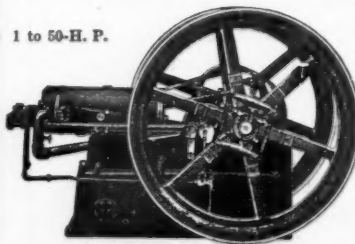
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High-grade four-cycle engines, made in
every style, horizontal and vertical, air
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tractors are used for plowing, hauling,
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and belt work. Catalogues and full in-
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ROEBLING

WIRE ROPE

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shown by long experience to be best adapted for satisfactory service.

JOHN A. ROEBLING'S SONS CO.

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Trenton, N. J.

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VOL. LXI. No. 25.
WEEKLY.

BALTIMORE, JUNE 27, 1912.

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Manufacturers Record

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the Philippines.

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the Postal Union, \$6.50 a year.

[Entered at the Baltimore Postoffice as sec-
ond-class matter.]

BALTIMORE, JUNE 27, 1912.

The editor of the MANUFACTURERS RECORD
in this week's issue of that industrial jour-
nal writes a most interesting article on the
[Tallulah Falls] development.—*Athens (Ga.)
Banner.*

The Tallulah Falls article was writ-
ten not by the editor of the MANUFAC-
TURERS RECORD, but by a student of the
Georgia School of Technology, Richard
Woods Edmonds, this being his first
newspaper assignment.

THE RAILROADS' INCOME FROM EARLY VEGETABLE AND FRUIT SHIPMENTS.

The interest of the railroads of the
South in the development of trucking
and fruit growing has probably never
been fully realized by people outside of
railroad circles. It is known to the
general public that the trucking and
fruit-growing interests of the South,
shipping over \$100,000,000 worth of
stuff a year to Northern and Western
markets, furnish a vast amount of
freight to Southern railroads, but the
importance of this freight in volume
and in the rate paid is not generally
fully understood. The statement was
recently made to the writer while in
Florida that it sometimes happen that
in the celery-growing district of that
State the product of one acre would pay
to the railroads as much as \$1500
freight. The statement was credited to
Mr. M. Riddle, general superintendent
of the Atlantic Coast Line Railroad,
and in reply to a telegram as to its cor-
rectness Mr. Riddle wrote as follows:

The statement that you refer to as having
been made by me was about as follows:

That there was land around Sanford that
had produced in a year freights which, if
shipped to New England points, would give
to the transportation and refrigerating com-
panies \$1500 per acre.

This was based on an acre of land produc-
ing 600 crates of lettuce, followed by 950

crates of celery, and these followed by 400
crates of beans. The freight rate from San-
ford to Boston is 56 cents, the refrigerating
charge 19½ cents, or a total of 75½ cents per
crate, which would produce \$1472.25. This, of
course, is the maximum yield under the most
favorable conditions.

A member of the Vegetable Growers' Asso-
ciation at Sanford, who has had several
years of practical experience, has informed
me that for a general average per acre on a
10-acre tract the production is about as fol-
lows:

500 crates lettuce.
450 crates celery.
200 crates beans.

A total of 1150 crates, which, at the rate
above quoted, would produce \$868.25 to the
transportation companies.

A grower at Sanford, whom I know very
well, has stated that he has done as well as
my first estimate, with lettuce and celery
on the same ground, but he contented him-
self with two crops, and has never planted
the third. There have been individual crops
on certain acres very much higher than my
maximum figures.

The confirmation of the statement
that the railroads for freight and icing
sometimes receive as much as \$1500 per
acre out of the celery-growing district
is an amazing proof of the marvelous
productivity of the soil. While this
amount has been paid, it is, as Mr. Rid-
dle says, above the average; but taking
the average as quoted by him for three
crops on the same land, and taking
Boston as the central point of ship-
ment, the transportation companies
would receive for freight and refrigera-
tion considerably over \$800 per acre of
land under cultivation in the celery
district.

While the yield of freight from celery
land is doubtless higher than from other
trucking sections, yet the amount of
freight paid by truck growers generally
per acre under cultivation is so great
that it is not to be wondered at that
every railroad in the trucking regions
of the South from Virginia to Texas is
putting forth all possible effort to en-
courage the development of this great
freight-creating business. Any agricul-
tural region whose crops can pay the
railroads, even in extreme cases, as high
as \$800 to \$1500 per acre undercultiva-
tion is necessarily a region of marvelous
potentialities, for there are few farm-
ing countries in the world which can
produce such crops, so many in number
and so great in quantity, in any one
season as to yield such a vast sum to
the railroads. When corn and wheat
yield to railroads only a few dollars of
freight per acre, a land where early
vegetables and fruit furnish many thou-
sand carloads of freight at the very
high rates paid by the truckers and
fruit growers is certainly worthy of the
very best railroad facilities that can be
provided. Every investor in Southern
railroads, every business man interested
in the advancement of the railroads of
this section, can understand from Mr.
Riddle's letter what the trucking devel-
opment of the South means to every
line of industry, and thus understand
why the MANUFACTURERS RECORD so per-
sistently emphasizes to the world the
possibilities of fruit and vegetable grow-
ing throughout the South.

THE OUTLOOK FOR THE SOUTH'S PROSPERITY.

A two-months' swing around the circle in the South makes one feel that what
has been counted as optimism in regard to this section is really but rank pes-
simism, so far above all that the MANUFACTURERS RECORD has claimed is the
broad, sweeping development that is taking place not only in the villages and
the towns and the cities of the South, but in every phase of its agricultural work,
and still more strikingly in the movement of men and money of Europe and
America now focussing on the South. Not until one travels over a wide sweep
of territory can he quite grasp the whole panorama that is being unfolded in
Southern development. The Richmond man sees the amazing growth of Rich-
mond, and congratulates himself that he is living in a town where there are
ever-increasing signs of wealth and activity, but he wonders just a little whether
Lynchburg, Petersburg, Danville and Norfolk are doing much. The Norfolk man
is enthusiastic about Norfolk, but he does not know so much about what Rich-
mond and Roanoke and other places are accomplishing. In Atlanta the writer
was on several occasions asked as to Birmingham, with an air that indicated
that while Atlanta people were amazed at the progress of their own city, they
were just a little skeptical as to whether Birmingham was really going to make
good in the carrying out of a development equal to its early promises. Birming-
ham people are so busy and so absorbed in the phenomenal progress of that place
that they have little idea of what Atlanta is doing, and when the question was
asked as to how the many office buildings recently constructed in Birmingham
were being filled before completion, the answer was given that a good many
people who had had offices in Atlanta were moving over to Birmingham, not at
all aware of the fact that skyscrapers in Atlanta were being filled with just as
much rapidity as those in Birmingham. In the smaller towns and cities which
have not made quite as much noise as Atlanta and Birmingham, and in places
like Columbus, Macon, Mobile, Montgomery, Jacksonville and Tampa, progress
is universal, especially in the development of industrial enterprises, and yet the
local people are not in touch broadly with what is going on in other parts of the
South. As Atlanta does not know Birmingham, and Birmingham does not know
Atlanta, so neither of them knows Houston, or San Antonio, or Galveston, Fort
Worth, Waco, Oklahoma City, or Chattanooga, or Nashville, or Knoxville, or
Shreveport, or hundreds of other places that are stirring with the same life and
energy that stirs the pulses of Birmingham and Atlanta, though some of these
cities, in proportion to population, are possibly beating both Birmingham and
Atlanta in the broadness of their development and the increase of wealth and
population.

It is not alone, however, in these thriving cities of the South that evidences
of progress are seen on every hand. The little towns, scarcely known of 50 miles
away from home, are proportionately doing about as much as the big places.
They are alert, energetic, full of enthusiasm, building sidewalks and streets and
improving the country roads, putting up finer residences, building schools and
churches, and giving every evidence of increasing prosperity.

And speaking of churches, there is probably no more striking evidence of
increasing wealth to be found than the remarkable activity in church building
throughout the South. Not only are churches being erected with an activity
that is somewhat astonishing, but these buildings are in many cases of the most
superb architecture and costly to a degree that is the highest evidence of an
enormous expansion in wealth, and of a willingness to spend that wealth for the
betterment of mankind. The whole South is developing a church architecture
which promises to make it unique in the world for the beauty and adaptability
of these church edifices.

And while the village and the country town are growing as are the big cities,
equally as strong evidence of Southern progress is seen wherever one familiar
with the agricultural interests of the South looks from a car window and con-
trasts present conditions with the situation even five years ago. In every direc-
tion there are seen more and better farmhouses, better painted homes, better
outbuildings, and a thoroughness of cultivation which speaks volumes for the
advancement made during the last few years in farming methods. In Oklahoma
the promise of magnificent crops has greatly stimulated everybody, and out in
Texas there are indications of the greatest agricultural prosperity that State
has ever known. Increasing wealth, partly by reason of a more well-rounded,
diversified farming, and partly by reason of the higher prices of cotton, has
given new heart and new courage to farmers, stimulated them to an improve-
ment of land and the use of more scientific farming methods, to better imple-
ments, to a more abundant use of paint and to the erection of better homes.
Thus there has been created an air of thrift and advancement which, though
it has not attained unto perfection, is a marvelous advance over what could
have been seen from the same car windows five years ago.

In this full-rounded growth the increasing prosperity of the farmer, the
enlarged demand for agricultural land, the doubling, and in many cases the
quadrupling, of farm land values, the growth of villages and towns and cities,
the broader spirit of municipal improvements, the enormous expenditures that
are being made for church and school buildings, the skyscrapers, the great hotels,
the advancing industrial activities—in all these there is a sure evidence of a

broad and more general progress throughout the South than that section has known since 1860. In times past we have had some years of great industrial activity even though agriculture was depressed by low prices. In other times we have had a stimulation to farm interests by temporary high prices for cotton coincident with depression in financial or industrial affairs of the nation. Here and there individual towns and cities have grown, sometimes at the expense of other places and of the country districts. But never before in the last half-century has there been such an advance movement which in its march to higher grounds of prosperity includes the farmer, the merchant, the manufacturer, the banker, and, in fact, the countryman and the cityman alike. A nation born in a day is scarcely more marvelous than the new life which has come to the nation of the South within the last few years.

A Richmond woman, complaining that Richmond was growing so rapidly that no one could any longer know most of the inhabitants of the city; the people in the mountains of North Carolina telling of the incoming of men of wealth from every section to make their homes in that favored region; Florida folks finding it somewhat difficult to keep track of the great increase in population in evidence in every part of the South, and indicated in the fact that even through all of the midsummer heat of last year the depot at Jacksonville was constantly thronged with inward-bound passengers or homeseekers, over 1500 having passed through that city in one day last summer; the incoming of great English capital for the development of water-powers in Alabama and Georgia; the constant meeting of investors from every part of the United States and many from Europe, spying out the land, and the universal trend of sentiment to the effect that the South is now to be indeed the great center of agricultural, manufacturing and railroad development for the next quarter of century, are all merely straws which are indicative of the way the wind is southward blowing.

If in all the South there is a pessimist, he ought to be exhibited as a rare curiosity, an anomaly, and if anywhere in the broad land outside of the South there be a pessimist as to business conditions, he ought to be sent South that he may catch a vision of what is coming in this marvelously blessed region.

Let it not be imagined that the South is a developed land; that there are no raw spots and no long stretches of unutilized land; that it is a country of good roads, and where all houses are well painted, and all farms look prosperous. A land such as that is not to be found this side of Paradise. The South is in the making, and it is marvelously interesting to watch the making and to catch the thrill of life that pulses through every artery of Southern activities. Great is the South of today, but it is an infant in swaddling clothes as compared with the giant in wealth and power which it is to be within the next 10 years.

RAILROAD NEEDS OF THE SOUTHWEST.

Chairman B. F. Yoakum of the St. Louis & San Francisco Railroad Co. is a son of the Southwest, who has grown up with a considerable part of its railroad history. Consequently what he has to say about its condition and its requirements with respect to transportation facilities merits careful consideration and attention. He recently remarked that for Missouri, Arkansas, Oklahoma, New Mexico, Louisiana and Texas to continue to increase in population as they have done during the last 20 years they should construct within the next two decades 27,520 additional miles of main-line railroads, and, in addition to that, at least half as much in new second and third tracks, sidings, yards and terminals. This would entail a total cost of more than \$1,650,000,000, estimating the main line at \$45,000 per mile and the other trackage at \$30,000 per mile. In other words, an average of more than \$82,500,000 per year would have to be expended during the period.

Particular attention was directed by Mr. Yoakum to the manner in which the lower part of Texas has developed in consequence of the construction of the Frisco lines between New Orleans and Brownsville. Great ranches which five years ago were used as ranges for cattle herds are now being divided into small farms, and by means of irrigation are producing large yields. Factories are also being built along the line, these including cotton gins, sugar mills, canneries, etc. Settlers are going into the region from every quarter. He also spoke about the great quantities of iron, lead and zinc ores awaiting development in Missouri, its untouched coal areas and its latent agricultural resources. In Arkansas conditions with respect to the natural riches of the country are similar. In each of these States, as well as in Louisiana, drain-

age has accomplished much good and more is being accomplished. On the other side of the Mississippi from Cape Girardeau southward there are also millions of acres of lands awaiting proper drainage. When they are prepared for agriculture more railroads will be needed to handle their crops. As for Oklahoma, he remarked that only 10,000,000 out of 44,324,100 acres are under cultivation. Besides, the State has a great coal area and extensive oil lands, all of which will require more trackage.

Undoubtedly Chairman Yoakum is correct in his conclusions as to the railroad requirements of the Southwest. His remarks along that line are in harmony with the utterances of the MANUFACTURERS RECORD for years. It is "up to" the railroads to provide the facilities, but it is also "up to" the States themselves to see that such treatment is accorded the companies that capital will not hesitate about taking bonds and other securities offered to finance their enterprises. It was but recently that another well-known railroad magnate commented upon the severity of the Texas laws respecting the issue of railroad securities and the difficulty experienced in financing construction. He also contrasted the cautious economy which his company felt obliged to follow in the treatment of its properties in Texas with its liberal expenditures made elsewhere. Oklahoma is another State with very rigorous railroad statutes which seem designed especially to check the enlargement of great systems. Doubtless there are other laws in other States mentioned which might be amended to the advantage of both the people and the railroad companies. If both sides will meet in the proper spirit and endeavor to attain conclusions which will be mutually agreeable, there is small doubt that the differences between the railroads and the States will be adjusted upon an equitable working basis.

BIG FARMING OPERATIONS BY CAPITALISTS AND CORPORATIONS.

In the Old South farming yielded great profits. It is doubtful if any other country in the world ever made as much money in agricultural operations as the South made from the early part of the nineteenth century to 1860—of course, in proportion to population. Any student of economic conditions knows this was largely due to the splendid management given by Southern planters to their farming operations. These profits were not due so much to slavery as to the fact that men of high intelligence and great executive ability were in a position to control and direct the routine work of farming through slavery. Equally as good results could have been achieved with free labor if free labor could have been managed and guided in its work to the same extent. Throughout the South there is a marked tendency back to the antebellum methods of handling large farm properties. Here and there a good deal is heard about big plantations being cut up into small tracts. In some sections of the South, and for some kinds of farm work, this may prove profitable; but coincident with this move there is another one of far-reaching importance which indicates that men of wealth and corporations are taking large bodies of land and farming them with the scientific management given to agriculture in the Old South, making a well-rounded development of each big farm. In this way it is possible to carry on a farm with the precision of a large manufacturing business.

A striking illustration of one phase of this movement is given in a letter published in this issue of the MANUFACTURERS RECORD from Ocala, Fla. Near that town two farms of 2500 acres each, owned by a local banker, are being operated in a most unique and interesting manner. The work of the tenants is directed by the manager of each farm. Under his guidance the tenant can plant in early vegetables as much land as he and his family can cultivate. The gathering of crops always requires more labor than their cultivation, and so the handling of this farm is adjusted in such a way that different vegetable crops are cultivated by the tenants on a plan which enables the massing of all the tenants for the gathering of any particular crop as it ripens. Under this peculiar system, the story of which is published for the first time, very great financial success is being made for the owners of the farm, the superintendent and the tenants. One directing head on each farm dictates absolutely what crops the tenants shall plant and how they shall be cultivated. The tenants thus get the benefit of brain work superior to their own in the planting and the gathering and the marketing of their crops.

In the same district three Western men are developing a 5000-acre farm, of which one-half is already under cultivation, and the balance is being cleared up as rapidly as can be done. This farm is devoted almost entirely to grain, cowpeas, velvet beans and livestock, and the results are said by the owners to far surpass anything that they could do in general farming in the West. This farm is also managed by men of executive ability, who are handling the proposition with the most modern equipment, using power machinery wherever possible to take the place of manual labor.

Another remarkable illustration of farming on a big scale is found about 30 miles from Waynesboro, Ga. Some years ago a Georgia man went West and engaged in cattle-raising. Making money in that, he returned to Georgia and purchased 17,000 acres of cut-over pine land. He wire-fenced this great tract, planned his farming operations on a very broad scale, raising all his foodstuffs for man and beast, and last year on 2500 acres of cut-over pine land produced 2700 bales of cotton. On this property he has his own ginning plant and his own cottonseed-oil mill; he buys the raw materials for his fertilizers in large quantities, mixes his own fertilizers, and carries out a well-rounded business, as complete in every detail as the most elaborate organization of a great manufacturing enterprise which may control everything it handles, from the raw material in the ground to the finished product. He has demonstrated what can be done on cut-over pine lands, where on 2500 acres he produced 2700 bales of cotton. Thousands of farmers in the South have produced two bales of cotton per acre on a limited acreage, but it is questionable if any one farmer in the South has ever before produced on so large an area as 2500 acres an average of considerably over a bale an acre. On this farm some 1500 head of cattle are kept, and hogs and mules in proportion. The live-stock is fattened and shipped to the market in such condition that it brings the highest prices.

Possibilities in corporation management are illustrated in one year's experience of the Red River Valley Land & Development Co., in which Pennsylvanians, Ohioans, Indianians and others are interested, with the Westdale properties in Louisiana. This corporation assumed control in December, 1910, of the properties embracing more than 8000 acres of land, and in the year ended November 30, 1911, had under operation or cultivation about 2100 acres. Five hundred acres, either new land or land that had been abandoned for lack of capital for several years, had to be cleared and prepared for cultivation, and the products about evened with the charges. But the other 1600 acres yielded a net operating profit of \$32,203, according to the report of General Manager D. P. Shockney. That was an average profit per acre of a little more than \$20. The main crops this year were cotton, corn, alfalfa and broom corn, and this year 2300 acres are planted in cotton, alfalfa, oats, potatoes, corn, sugarcane and broom corn. The general manager estimates that the whole property when put in condition will do as well as the 1600 acres did last year, and that these 1600 acres are hardly more than 50 per cent. efficient now.

In Mississippi English cotton-spinners control 30,000 acres of cotton-growing lands in the rich delta country, to the operation of which most approved methods are being applied.

MILLION YARDS COTTON DUCK FOR AUTOMOBILE TIRES.

One million yards of high-grade duck, to be made from Sea Island and Egyptian cotton, has recently been sold by a Georgia cotton mill to a manufacturer of automobile tires. The quality of this material is of the highest grade, used only in the larger tires, the lower grade of goods being available for the smaller tires. One million yards of cotton duck, one yard wide, is a pretty big order to go from one mill to one tire

manufacturer. It illustrates, however, the ever-broadening market for cotton and the reason why a big cotton crop has been so promptly absorbed. Every year sees new uses for the South's cotton. Not only is it being used in the manufacture of tires; it is likewise used in the manufacture of automobile tops, and the wider the use of automobiles, the greater will be the demand for cotton.

JUSTICE TO SOUTHERN COTTON-GROWERS.

Not only in the volume of production, but in the facility with which the immense yield of cotton has been marketed, at remunerative prices to the grower, the season now drawing to a close marks a very important epoch in the agricultural and economic history of the Southern States. A crop of phenomenal proportions, exceeding by about two million bales the heaviest yield heretofore secured and three millions greater than for the season immediately preceding, has been distributed to home and foreign users on a basis of value higher than obtained in at least nine out of the previous fifteen years, and much higher than in most of them, notwithstanding that this latest yield is very much in excess of any possible current consumptive requirements, and will consequently go materially to increase the world's reserve supply. This result is gratifying from whatever point of view it is contemplated. With increasing cost of production—greater cost of land, implements and all other things that go to the making and marketing of the cotton crop—it would have been nothing short of a calamity had prices receded to any such level as was frequently experienced in earlier years, when a yield of exceptional proportions was raised.

This excellent summary of the cotton situation by the *Financial Chronicle* of New York emphasizes one fact generally obscured by the influences that would buy cotton at cheap prices, the fact that in the past ten years the cost of production of cotton has increased, so that, if prices during that period had remained anywhere near the level of the prices that prevailed in the preceding decade, one million cotton-growers would have faced ruin instead of having been able to make the necessary improvements on their farms and thus sent hundreds of millions of dollars into circulation in many channels, swelling the volume of Southern prosperity.

Another phase of the situation should be emphasized, and that is that cotton-growers in increasing numbers are looking to greater crops, not through enlargement of acreage, although the area in the South still susceptible to productive cotton-raising is a guarantee against any world shortage in that particular, but through raising more cotton per acre by greater fertilization and better methods of cultivation. Cotton-raising energies, instead of being wasted in part by scattering, are thus being conserved, with the result, first, that greater returns for cotton per acre are to be expected, and second, that a greater amount of supplies for man and beast may be raised at home, giving the cotton-growers more independence of the cotton-buying market.

Complementary to the situation as to the growers should come a systematic effort on the part of the manufacturers to enlarge the world markets for cotton goods, and, at the same time, to cultivate among buyers of cotton goods a willingness to pay a little more than they have been paying for the products. The enhanced cost of the raw material, due, primarily, to the enhanced cost of production, has set manufacturers of the world to schemes to depress the price of the staple. The time, the energy and the money that have been expended upon such schemes, if

they had been devoted to building up markets for finished goods and letting the buyers know the reason for higher prices, would have brought the producers and the manufacturers into a close understanding and co-operation of advantage to both classes.

ACTIVITY THROUGHOUT THE SOUTH.

Indicative of the spirit of development throughout the South are two letters from South Carolina, reaching the *MANUFACTURERS RECORD* at about the same hour. One is from Sumter, S. C., and in this Mr. A. V. Snell, secretary of the Chamber of Commerce, writes:

Sumter is going ahead by leaps and bounds, and I believe that any impartial investigator would bear me out when I say that no city of the old South for its size is doing more than Sumter right now. It is having a building boom. Two new hotels are under way, one costing \$100,000 and one \$50,000; two office and bank buildings, one to be seven stories, are under construction, as are two new churches, one to cost \$40,000, and a \$75,000 gas plant is being installed. The S. W. R. R. Co., reported to be a branch of the Seaboard, is being graded into Sumter from McBee, where it connects with the Seaboard, and from which point north but a few miles will connect with Monroe, thence via Charlotte to Bostic and the Clinchfield. From Sumter it is certain to go south to Charleston. Glance at a map, and the importance of this extension is easily seen.

In Sumter on every hand smaller buildings and dwellings are going up. Seventeen stores are in course of construction. The Southern Express Co. is to have a new home. Recently a new wholesale dry-goods house has been established with local capital. This has been followed in the last few days by the Witherspoon Bros. Shoe Manufacturing Co., with \$35,000 capital.

The other letter, from another town in South Carolina, or, rather, we should say city, for this comes from good old Charleston, tells of the rapid suburban development that is taking place around that city. Mr. James Allan of the Allan Jewelry Co., wholesale jewelers, writes:

There is great development just now taking place in Charleston in suburban property, and there will be a demand for mechanics of all sorts and building contractors. One hundred and twenty-five lots have recently been sold in the Hampton Park Terrace, just opened up, and as soon as the sewage and water pipes have been completed houses will be built. I have been elected president of two other development companies which own some large tracts of land in the same section of Charleston, the Park View Co. and the Riverside Park Co., and also a large tract of land outside of the city known as the Manor Company. All of this property will be opened up for development.

Charleston is very much congested. Rents are very high, and there has been a large increase in land values within the last few months.

The spirit of home-building activity and the opening up of suburban property around Charleston, the general building activity of all kinds in Sumter, are but typical of that wide development of every kind which is seen in every part of the South. One of the most striking phases of Southern advancement is that activity is not confined to a few towns or cities, but is almost universal in the broad region that stretches from the Potomac to the Rio Grande. In this widespread activity, covering every phase of business, of building operations, of road construction, of improved farming operations, is the sure and certain evidence of a broader and greater prosperity than the South has ever known.

A representative of the Netherlands Trading Co. has been studying the opportunities in Florida for the establishment of a colony of Hollanders.

An Open Shop City

HOW TAMPA HANDLES ITS LABOR TROUBLES.

Tampa is a town whose business leaders have backbone made of iron and not of the jelly-fish stuff so largely used in making backbones in this day and generation. Tampa makes no fight against labor unions until labor unions undertake to prevent non-union men, by violence, from working, and then Tampa hits, and hits hard. Its business leaders take the ground that in Tampa every man shall have the right to work when and where he pleases, undeterred by violence on the part of those who seek, through labor unions, to rule or else ruin. Tampa believes that men have a perfect right to organize themselves into labor unions. It makes no fight against them on that account, but it says to the labor union people and to the world at large that no labor union shall by force prevent other men from working. In this respect it is an open-shop town, wide open in its recognition of the supreme right of every man to decide for himself as to whether he will or will not be a union man.

This is the greatest cigar-making center of the world. Some 15,000 or more hands are employed in the cigar factories in this city, counting Ybor City and West Tampa as a part of the community. Most of these cigarmakers are foreigners, Italians, Cubans and Spaniards. The Italians are very largely from Southern Italy and Sicily. They are the most troublesome element with which the community has to contend.

A few years ago the union laborers went on a strike and undertook by violence to prevent the non-union hands from working. Pickets surrounded the cigar factories and union laborers guarded the streets to prevent any non-union man from getting into the factories. The business men of Tampa regarded this not as merely a question between employer and employee to be settled between them, but as a question affecting the life of a community. They believed that the men who wanted to work should have a right to work. They took no part in the dispute between the employers and employees, but they took a very vigorous and lively part in saying that they would protect any man who wanted to go to work. A meeting was held of leading citizens, bankers and business men generally to organize a protective committee, and this committee was authorized to invite the co-operation of others. Every member was expected to provide an automobile and to secure three or four other men who were willing to give up their time and take the risks of the work which they tackled.

The cigar factories open about 5 or 6 o'clock in the morning and close early in the afternoon, the morning hours being best for cigar-making. The employees are, therefore, moving to the factories by 5 o'clock in the morning. The committee arranged that an automobile party should arrive at each factory before 5 o'clock, fully armed and prepared to protect every non-union worker. A notice was sent out that the factories would be open and every man and woman who desired to work could enter unmolested, for there were enough armed citizens in the neighborhood to make sure of their protection. The union men made many dire threats. Black-hand letters promising death were sent to the leaders in the citizens' movement, but they were not deterred from doing their duty. These men, many of them the leading citizens of the community, had sufficient faith in the justice of their cause and sufficient backbone to fight

for it if necessary, to leave their homes every morning about 4 o'clock and stay around the factories until every employee who desired to work was safely inside and out of any possible danger.

A leading attorney against whom many threats had been made was informed that a meeting was being held at which he was being denounced and open threats were being made to make way with him. Gathering four or five of his intimate friends, and himself the only unarmed man in the party, he hurried to the hall in which 300 or 400 foreigners were listening to the wild denunciations of a leader who was proposing the death of this particular lawyer. Pushing his way through the angry crowd, he walked to the platform, and before the speaker or the audience quite realized what was being done, grabbed the speaker by the back of the neck and the seat of his trousers and with a tremendous swing threw him out into the audience. The meeting broke up with a wild scramble of the people in the room trying to get out of doors and windows as fast as possible, not knowing what was coming next.

During this strike many acts of violence were committed, and a number of people were killed, supposedly by the strikers or those in some way affiliated with them. But the strike was a failure, and though extreme measures were used in defending the right of men to work, regardless of unscrupulous labor agitators, Tampa made itself known to the world as an open-shop place.

Sometimes Tampa's labor agitators, who month after month continued to stir up trouble, preaching hatred and striving to create a spirit of violence in the community, found it necessary to leave that city for that city's good. Their leaving was not always of their own choice, but the city was the better off without them, and the men who suggested their going, and going quickly, were among the foremost business men of the community who had determined that in that city, at least, they would have peace, even if they had to fight for it. Many tales are told of the things done in the various strikes which for several years afflicted this thriving community, but Tampa proved equal to every emergency. The business men having determined that Tampa should not be ruled by labor bosses nor anarchists, but that it should be known throughout the world as a town ready to give the very fullest protection to the life and property of every man who wants to work, or who wants to run his factory without regard to what labor unions may or may not say or do, have whenever necessary acted with a vigor that proved they meant what they said.

The remarkable growth of Tampa proves that there are a great many thousands of people in this country who believe in this principle. People who love to see a community made up of men of backbone, ready to risk their own lives and their own property in order to defend others in whom they have no personal interest whatever, have concluded that Tampa is made up of the kind of men with whom they would like to be associated. The love of fair play inherent in all civilized people, and doubtless even in savages to some extent, naturally causes right-thinking people to be antagonistic to the labor unions whenever labor unions

undertake to enforce their views by violence, but cowardice keeps many a man from expressing his sympathy with a non-union man. Men will sometimes see, as in the anthracite strike in Pennsylvania a few years ago, the most outrageous attacks of violence, even to murder, without raising a hand or filing a protest because of their fear of the power of labor unions. The average union man is an honest, well-meaning man. Most of the members of labor unions are civilized men with instincts of humanity in them, but unfortunately they often permit their leaders to carry them into strikes which in their hearts they disapprove, and to carry some of their men into deeds of violence at which they would shudder were it not that somehow they have been made to feel that the end justifies the means.

Tampa is setting the country an example which is worthy of very careful study. Men who are determined that no non-union man shall not work in the same town with them had better keep away from Tampa. It is not a healthy place for them, but it is a mighty healthy place for the development of a strong virile spirit which guarantees freedom to every man so long as he does not interfere with the freedom of any other man. Tampa's business people regard this question on a very much broader basis than that of an individual dispute between an employer and his union employees. They look upon every contest of this kind as one in which each business man is individually responsible to his community for putting his own life at stake whenever necessary to defend the right of men to work. That is the kind of spirit which could build a prosperous city in a desert. In a place of such limitless advantages as Tampa that is bound to make a great city.

The business people of Tampa are determined that there shall be no discrimination against non-union labor. Contractors and others who depend upon the goodwill and the financial backing of the town for business find it necessary, if they would succeed in doing business in Tampa, to make it known that under no conditions will they discriminate against non-union labor merely because it is non-union. If they want business in Tampa and want the financial backing of people there, they cannot shut out labor merely because it does not belong to some union.

All honor to the men of Tampa and to the women who have encouraged them in this good work. They are really fighting the country's battle for freedom of action. They are showing how a community of civilized men can determine that anarchy shall not rule over them. R. H. E.

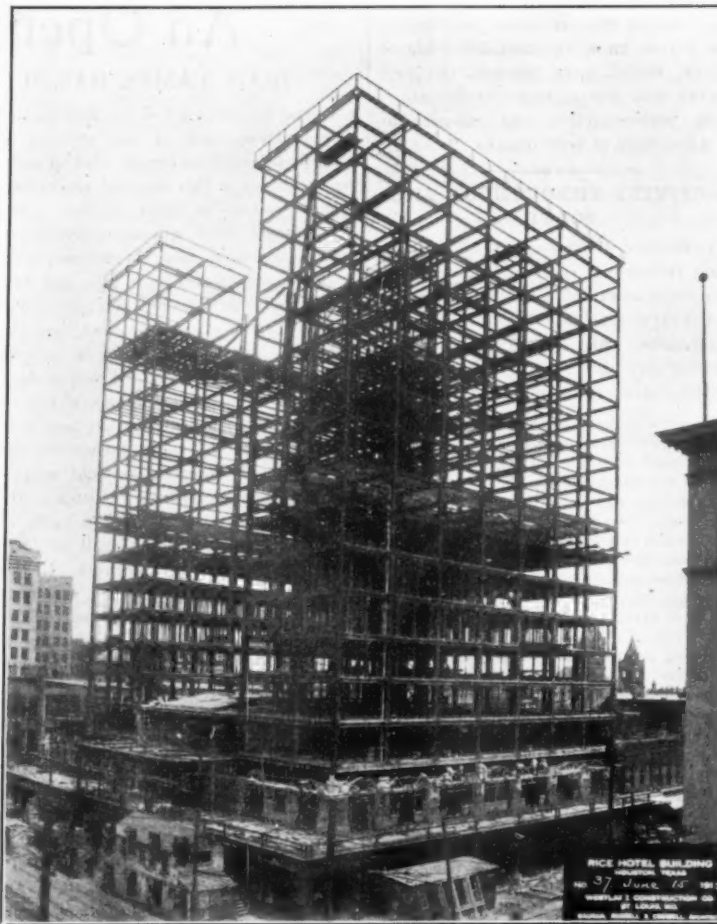
BIRMINGHAM IRON MARKET.

Summary of Developments During the Past Week.

[Special Cor. Manufacturers Record.]

Birmingham, Ala., June 22.

The pig-iron producing interests are now disposed to adhere strictly to a basis of \$11.50 per ton at Birmingham for any delivery within the remainder of the year. Such action is due largely to the continued heavy movement from furnace yards and to the further indications of inability to make delivery as stipulated in previous sales. No sales are reported for the week at lower figures than referred to, but the bulk of the tonnage sold is for shipment in the fourth quarter. An aggregate of 3000 tons was sold for this last delivery, with spot requirements, consisting principally of carloads and lots of 100 to 150 tons each. Carload quantities of certain brands for spot delivery have recently sold at \$12 per ton for No. 2 foundry. The scarcity of all low grades is still a feature of the market. Practically all



THE RICE HOTEL AT HOUSTON.

Construction of the steel frame of the 18-story Rice Hotel in Houston, Tex., is shown in the accompanying illustration. Concrete pouring of the floors has progressed to the tenth story. It is believed that by November 1 the ground floors will be occupied, and that by January 1, 1913, the hotel will be completed. Its total cost will be \$2,500,000.

concerns are unwilling to enter grades below No. 3 foundry at a greater differential than 25 cents per ton in price, while premiums are being asked for No. 1 soft and for silvery gray. It is noted with interest that two of the leading producers are practically out of the market for all grades, and that another large concern expects to show a reduction of some 15,000 tons to have been made in its stock accumulation during June. Mention is frequently made of the tonnage that will have to be carried over on contracts, while those most conversant with conditions existing expect a liberal buying movement with the resumption of foundry operations after the usual close down for July 4th. So far, no mention has been made of tonnage being held up against contracts in anticipation of the usual semi-annual suspension, but the demand for spot deliveries, other than against contracts, has no doubt been affected. It is understood that conditions in practically all quarters of the general foundry trade have improved, and that the melt will be considerably larger during the second half of the year than in the first. This is particularly true of the cast-iron-pipe industry, which represents some 60 to 70 per cent. of the tonnage consumed in the South. The inquiry now pending involves a very fair tonnage in the aggregate. A number of 1000-ton lots for requirement in the third quarter have been submitted, and several larger requirements to cover the entire last half are under consideration. As has been stated, the demand for spot shipments is not so strong as formerly, and the aggregate of tonnage sold is affected accordingly, but the market is considered stronger, and the producing interests have the situation better in hand than at any time since January 1. Prevailing prices for any delivery

prior to January 1, 1913, are considered very firm, as below, viz:

- No. 1 foundry, \$12.
- No. 2 foundry, \$11.50.
- No. 3 foundry, \$11.
- No. 4 foundry, \$10.50 to \$10.75.
- Gray forge, \$10 to \$10.25.
- Mottled, \$9.75 to \$10.
- Standard basic, \$11.25 to \$11.50.
- Off basic, \$10.75 to \$11.25.
- Standard warm blast charcoal, \$22 to \$22.50.

These prices are all per gross ton f. o. b. cars at Birmingham district furnaces.

The Ensley (Ala.) steel mill is accredited with specifications for an additional 26,000 tons of standard steel rails, and the small mills report a fair volume of orders for bars and shapes. Some 5000 feet of 16 and 20-pound sections of light steel rails were sold in the week, and a larger requirement is represented in inquiries still pending. The demand for wire product is about equal to the output. It is understood that the Alabama City (Ala.) mill will soon be closed down for repair, but that operations will be resumed not later than August 1. The prices being received for all of the finished products are understood to be satisfactory, and the prospects for new business unusually good.

The cast-iron-pipe market is without items of especial interest. All local producing capacity is being operated on specifications actually in hand, and it is quite probable that a shorter period will be taken for the usual semi-annual inventory than has been taken formerly. For the business being placed, the schedule of prices quoted is being realized, and none of the several interests appear anxious to enter additional large tonnage requirements at those figures. Class "B," or water pipe, is quoted as follows per

gross ton f. o. b. cars here, viz: 4-inch to 6-inch, \$23.50; 8-inch to 12-inch, \$22.50; over 12-inch, average \$21.50, with \$1 per ton extra for Class "A," or gas pipe. Special fittings are quotable at \$45 to \$50 per net ton at foundry, depending upon size of requirement and nature of castings.

Incident to the cast-iron-pipe market, it is noted that the plant under construction at Holt, Ala., by the Central Foundry Co. will soon be completed. Though producing smaller sizes, the plant referred to, when in operation, will have an output equal to that of the one water-pipe-producing plant that remains idle, thereby making the total output normal, or equal to the large output recorded in 1907. This, of course, applies to the local production only.

The most important of recent transactions involving old material was the sale of the mill equipment at Gadsden, Ala., formerly operated by the Kyle Lumber Co., to the Kilby Locomotive & Machine Co. of Anniston, Ala. This transaction involves some \$25,000, and takes care of the railway and mill equipment, as well as all miscellaneous scrap. The movement from local yards in the week was light comparatively, although some 1500 tons of cast scrap was sold for future delivery. Dealers' asking prices are at about the same level as has been in effect for some weeks past, but with a larger accumulation of the several grades.

Dealers' asking prices for old material are as follows per gross ton f. o. b. cars here, viz:

- Old iron axles, light, \$15 to \$15.50.
- Old steel axles, light, \$12 to \$12.50.
- Old iron rails, \$11.50 to \$12.
- No. 1 railroad wrought, \$11.50 to \$12.
- No. 2 railroad wrought, \$11 to \$11.50.
- No. 1 country, \$7.50 to \$8.
- No. 2 country, \$7 to \$7.50.
- No. 1 machinery, \$9 to \$9.50.
- No. 1 steel, \$9.50 to \$10.
- Tram car wheels, \$8 to \$8.50.
- Standard car wheels, \$11.50 to \$12.
- Light cast and stove plate, \$6.50 to \$7.

Within the week the requirement of two railway companies operating in the South was placed with Kentucky coal-mine operators, while a very significant tonnage was placed with a local concern by a railroad operating in the Southeast. The requirements of the oil mills and compresses operated in the South are now taking definite form, and order-books should show substantial additions within the next 60 to 90 days. With the resumption of operations to a limited extent by those railroads operating across the Mississippi River, some relief has been offered the market so far as spot deliveries are concerned, but the output from operations is still considerably smaller than formerly. It is understood that the properties of a large commercial coal-mining interest has been purchased by a local furnace company. Confirmation of such a sale is not yet obtainable, but the withdrawing from the market of the output from the properties referred to would have quite an effect on the steam and domestic coal situation.

It is understood that the American Radiator Co. has purchased a lot of 12 acres in North Birmingham, on which the proposed new plant is to be erected. At present this company is operating in the plant of the former Birmingham Pipe & Casting Co., which is located in Birmingham proper.

President Finley of the Southern Railway Co. has been advised of the purpose of the Munson Steamship Line to inaugurate on September 11 regular service between Mobile, Ala., and South American ports.

Three Unusual Farming Operations in Florida on Reclaimed and Cut-Over Lands.

[Editorial Correspondence Manufacturers Record.]

Ocala, Fla., May 20.

Three object-lessons of interest, not to the South alone, but to the whole country, are to be found in some great farming operations near this place. By many persons this State has been accounted suitable mainly for citrus-fruit growing or early vegetables, but in Marion county, of which Ocala is the county seat, demonstrations are being made which show that in Florida—and what is true of this State is true of many other parts of the South not now given to diversified agriculture—there are unlimited opportunities for broad agricultural work, which means much to the prosperity of the South and to the lessening of the demand of this section upon the West for food for man and beast.

These three object-lessons are worthy of some elaboration. The story of each is interesting. These stories deal with farming operations of an entirely different character, and yet each in its own way is a type of the kind of work which can be made to yield very big results through the diversification of Southern agriculture, the reclamation of overflowed land and the utilization of cut-over lands.

SOME RECLAMATION WORK AND ITS RESULT.

Jefferson Davis and "Stonewall" Jackson are again in partnership, working this time with great energy and much success for the material advancement of the South. They are working with an energy which marked the career of President Davis and General Jackson, and with an engineering skill which reminds one of a story once told about "Stonewall" Jackson and a "rule-of-thumb" engineer. As the story goes, General Jackson had in

waist deep. It was, indeed, a lake, but these men had the vision to see that if it could be drained it would make a principal for farm operations. They asked a number of engineers to devise a plan, but most of them only suggested how not to do the work, and so, not finding the right man to tell them how to do it, they did it themselves. On the edge of this 5000-acre tract, from which there is a considerable rise in the elevation of the

ence, and then these motor cars passed over long stretches of fields, where roads had never been made, crossing oat fields, where the reaper had done its work, out through alfalfa fields, and then back to a point where heavily-loaded wagons were hauling a heavy yield of oats from land which two years before was under water.

When a native, not familiar with the possibilities of reclamation, first saw what these two men were doing, he said to a neighbor that he had seen two Yankees

away a gasoline tractor is pulling a gang of plows, for on this vast stretch of level land machinery to a large extent takes the place of manual labor. In the distance were reaping and binding machines cutting oats, while in the foreground a loading rack was being constructed for the handling of hay. When it is remembered that Florida buys much of its hay from the North and West, and some of it from Canada, every step made in the growing of a home supply of hay is of more than



INTERNATIONAL HARVESTER CO. MACHINERY AT WORK ON THE ANTHONY FARM, NEAR OCALA, FLA. CAPACITY OF THRESHER, 2000 BUSHELS OF OATS A DAY. GASOLINE ENGINE OF 45 HORSE-POWER.

his army a bridge builder who had never been trained as an engineer, but who had remarkable ability to "get there" in bridge construction. On one occasion Jackson gave orders to his engineering corps to prepare plans for building a bridge across the river, in order that his army might move on one of its hurried marches. The old bridge builder, without waiting for the plans of the engineer, rushed his men on the job, and before the engineers had worked out scientifically how the bridge could be constructed across the river, Jackson was moving his troops over the bridge which his old hustling bridge builder had hastily thrown into place.

The Jefferson Davis and the "Stonewall" Jackson who are now united in material work are known as Jefferson Davis Young, a farmer of Cecil county, Maryland, and Thomas Jackson (Stonewall) Kyle of Gadsden, Ala. These two men found a tract of about 5000 acres of overflowed land in Marion county, Florida, through which the Ocklawaha River ran its tortuous course with more crookedness than a ram's horn. In its windings the river could not carry off the water rapidly enough to prevent an overflow of all the bottom land, which in times of high water was covered with water from knee deep to

land, they cut a straight channel with a big dredge, starting down the river and cutting toward the source. Then they built an embankment to prevent an overflow, and then they carried the dredge straight through into the river and opened a channel. The rush of water from the old river bed made by nature to this new straight channel made by man promptly resulted in the water from the whole property being drained off to such an extent that lateral ditches could be cut. As the dredge cut its way in making the channel it threw the dirt toward the land to be reclaimed. Parallel with the levee thus constructed, a ditch was cut to catch the seepage water. From this ditch to the old bed of the river laterals were cut at regular intervals.

Three years ago, when Jefferson Davis Young tried to cross this bottom land, the water for much of the distance was up to his waist.

Two years ago work on the channel had proceeded far enough to show that it would be successful. The other day four automobiles drove over a considerable part of this land, following, for the greater part of the distance, the farm roads, which, though heavy by reason of recent rains, were easily traveled without inconveni-

who were wasting their money trying to dry up a piece of land. When this remark was repeated to one of them he sent back the reply: "Please tell your friend that one of us is named Jefferson Davis and the other 'Stonewall' Jackson, and you can't make very much of a Yankee out of either of those names."

Mr. Davis is a farmer from one of the richest counties of Maryland. Mr. Kyle is a member of the Kyle Lumber Co., one of the concerns of North Alabama, which for years has ranked as one of the most prosperous institutions of Gadsden. They are enthusiastic over what they have achieved, and they have a right to be. The cost of drainage has been less than \$20 an acre. Judging by earnings thus far made, the annual income per acre promises to be four or five times as much as the cost of saving this land and turning it to the uses of civilization. For unnumbered years it has been a waste spot, the abode of fish and ducks only. Through such creative work it has now become a scene of agricultural activity which matches in power machinery work almost anything that can be seen in the West. As one crosses the bridge which spans the new channel he sees nearby the big dredge which did the work. A short distance

local concern—it is State-wide in its importance.

Inquiry as to the health of men who are working in these great stretches of what had been overflowed land developed the fact that with 25 or 30 men thus employed during the last three years, the aggregate amount of sickness on the whole place has not exceeded 10 days. In part this is attributed to a rule enforced as strictly as possible that the men shall not drink surface water. At the little camp on the rising ground which overlooks the drained land there is a 60-foot well, which passed through some 30 or 40 feet of clay and then some distance through solid rock, striking a strong flow of very fine water. Every man is provided with what is known as a "South African Water Bag," although it is made in Portland, Ore. This bag, which is large enough to hold one or two gallons, is made of cotton duck or some similar material. Every worker, white or black, on the place is required to fill one of these bags when he goes out into the field and to hang it in the air. In this way it does not absorb the heat of the sun, but is cooled by the winds which almost constantly sweep over that section. None of the men are allowed to drink out of the water bag of another. If any man

forgets to carry his water bag into the field he is compelled to go back and get it, and is docked for the time thus lost. It is believed that to this enforcement of the drinking of pure water very much of the remarkable healthfulness of the men employed on the place must be attributed.

This land produces luxuriantly corn, oats, alfalfa, sugar-cane, onions, potatoes and other leading crops. The first cutting of alfalfa this season—and this is the first year—gave a yield of one and one-half tons per acre, and five or six cuttings are expected during the year. As alfalfa hay

merely made a fortune for its owners, but has given an object-lesson in what can be done in the reclamation of many thousands

WESTERN GRAIN GROWERS' WORK IN FLORIDA.

Stretching for four miles along the Seaboard Air Line, 8 or 10 miles from Ocala, is a farm of 5000 acres, of which nearly 3000 are under cultivation, that reminds one of a great Western or Valley of Virginia grain farm. The owners of this farm, which is said to be the largest piece of cleared land under cultivation by any one concern in Florida, are devoting it

of acres in the immediate vicinity, as well as of much found throughout a large part of our whole country.

these people definitely decided to make of their property a grain farm. It is operated with the most complete power machinery, all the work being done with the most up-to-date equipment. The plowing is done by traction engines drawing six plows. The threshing is done by the most improved automatic feed thresher and self-stacker.

else on the same land in the same year. As illustrating this point, we have in this section on well-cultivated upland land, as distinguished from the bottoms or reclaimable lands, a yield of about 30 bushels of corn per acre. On the average this will bring 80 cents per bushel, or \$24. This is more than the Western farmer will average from an acre of his corn.

"But following the corn we can grow other things—velvet beans, for instance, which will average about 25 bushels, and which sell at an average of from \$1.50 to \$2 a bushel, although this year an ex-



HAY WITH CANTALOUPE AS A BY-PRODUCT CROP ALL FROM ONE FIELD IN J. M. MEFFERT'S FARM, LOWELL, NEAR OCALA, FLA.

is worth in Florida in the neighborhood of \$30 to \$40, comment on the profit of alfalfa growing, provided it continues to yield as well as anticipated, is scarcely necessary. Bermuda onions are grown to perfection, and some land rented to a tenant on the basis of one-third of the crop to the landowners has yielded to them a net profit of over \$100 per acre this season, which is making the land rent at over \$100 an acre. Other crops are apparently making equally as good showing.

An Ocala man, and this property is tributary in its operations to Ocala, who has the credit in town talk of having

almost wholly to grain. They are Western men. Of the three owners, one has been living in Florida some years, although his boyhood was spent in the grain regions of the West. Another, as administrator, had for seven years the management of a 1000-acre farm in Indiana, then worth about \$100 an acre and now worth \$200 an acre. The other partner is a Western capitalist who has put his money into this farm operation as an investment.

The general public has labored under the delusion that Florida can never be a grain-growing State. By many it has been thought that Florida agriculture must

Some of the statements made by the men who manage this farm are very significant. They are indeed of very great importance, not alone to Florida, but to the entire South, for the South should double its corn crop. Commenting on their experience, the Anthony farm people say:

"Comparing grain growing on our property in Florida with the West, the advantage is altogether on our side. Here we always raise two crops on the same land. It costs us less to raise our corn than it costs the Western farmers. It is true we have a somewhat smaller yield,

traordinary demand has made the price \$4 per bushel. Taking the low price of \$1.50 to \$2 per bushel and adding to the corn, this will give an aggregate of about \$74 per acre, an entirely feasible profit, and certainly two to three times as much as the Western farmers can do in corn raising. We follow our oats, which yield about 25 to 30 bushels an acre, by soy beans or cowpeas, which not only give us the beans or the peas, but also a ton to a ton and a half of hay, and in this case we get from \$75 to \$80 per acre a year.

"These yields are without the use of commercial fertilizers. In the place of



THIS FIELD OF OATS NEAR OCALA, FLA., YIELDED 30 BUSHELS PER ACRE, RAISED AT A COST OF \$5 PER ACRE AND SOLD FOR SEED OATS AT \$1 PER BUSHEL. THE OATS WERE HARVESTED IN MAY AND WERE FOLLOWED BY A CROP OF COWPEA HAY WORTH FROM \$20 TO \$30 PER ACRE.

netted \$24,000 this year on cabbages, is organizing a company to rent 1000 acres of this reclaimed land for the purpose of general farming. If the yield of this company and the other tenants, as well as the yield on the land operated by the two people who own the property, is at all in keeping with results thus far achieved, this piece of reclamation work has not

be confined to citrus fruits and early vegetables.

This big property, operated under the name of the Anthony Farm Company, is in a region which has been notably successful in raising early vegetables, watermelons, cantaloupes and other things, and in the growing of which many men have accumulated comfortable fortunes. But

but the price of corn in this section is always higher than in the West, and this gives us net results of as much and in many cases more than the Western farmer can secure for his corn. Here the corn matures early, and is always followed by a second crop, which is worth equally as much as the corn, while in the West the farmer who raises corn can raise nothing

fertilizers we plant velvet beans, or cowpeas, or soy beans, and they take the place of fertilizers to such an extent that it is estimated that their value as a fertilizer material is over \$10 per acre. The only fertilizers we have used this year are on cantaloupes and sweet potatoes."

In view of the very great importance to the South of diversified agriculture of this



AN AUTOMOBILE PARTY ON THE LAND OF KYLE AND YOUNG AT MUCLAN, FLA., WHICH THREE YEARS AGO WAS A LAKE OF 5000 ACRES, AND NOW, THROUGH RECLAMATION, IS PRODUCING HEAVY CROPS OF GRAINS, GRASSES AND VEGETABLES.

killed, Mr. H. C. Bailey, the secretary and treasurer of the Anthony Farm Company, was asked to present a detailed statement of the operations of his company. Eliminating a few paragraphs in order to save space, his written statement is as follows:

"The Anthony Farm Company of Anthony, Fla., is composed of 5000 acres, known in Florida as high hummock lands, of which some 2500 acres are in cultivation as follows:

"740 acres in oats.

"160 acres in rye.

"75 acres in cantaloupes.

"25 acres in Japanese cane and snap beans.

"700 acres in corn.

"500 acres in velvet beans.

"200 acres in sorghum cane.

"After the crops which we will harvest in May and June, we expect to plant the same land as follows:

"600 acres in cowpea hay.

"200 acres in soy beans.

"200 acres in sweet potatoes.

"The prevailing idea is that Florida is a trucking and citrus fruit proposition. We are proving this to be a false idea. We expect to get 75 to 80 cents per bushel for all of our oats, which is our first crop, and is followed by our various hay crops, which average one to two tons per acre, and for which we received \$27 per ton f. o. b. cars on our farm for all we sold last year. Cantaloupes and watermelons are the only trucking crops we raise.

"Our corn runs from 30 to 60 bushels per acre, owing to the kind of attention we give to its cultivation, and our general manager, Mr. J. C. Howell, is producing a corn practically weevil-proof. We sold some of this corn for seed this year as high as \$4 per bushel.

"I predict that in a very few years Florida will prove to be one of the best stock-growing States in the Union, for the simple reason that we can produce the most bountiful forage crops known. Take, for instance, the Japanese cane, which produces from 20 to 30 tons per acre and is a perennial and carries 67 per cent. carbon hydrates; also the velvet bean, which is planted any time up to July as a second crop and matures late in the fall, when the stock is turned in to harvest it. The stock eats nearly all the vines, as well as the beans, and the Southern people regard the velvet beans superior to corn for feeding cattle.

"You can find in Marion county as fine cattle and hogs as in the Northern States, but not in large quantities. These are what have been bred up by the up-to-date farmers. The quality of the stock is only a question of breeding up.

"There is nothing Florida needs more than an up-to-date packing-house, to which the farmers can ship their stock when

ready for the market. As it is now, the growers are at the mercy of the local butchers, whose facilities are very limited. Ocala is the logical point for the estab-



THREE YEARS AGO THIS TRACT OF 5000 ACRES OF LAND AT MUCLAN, FLA., WAS TWO OR THREE FEET UNDER WATER; TWO YEARS AGO IT WAS BEING DRAINED; NOW IS LARGELY UNDER CULTIVATION AND PRODUCING STAPLE CROPS, AS WELL AS BERMUDA ONIONS, POTATOES, ETC.

lishment of a packing-house; it is located right and in the stock-feeding section. A large amount of capital can be secured here for the establishment of packing-house, ice and cold-storage plant if the right man can bring to the town a fair proposition.

"Last year the Anthony farm fed 400 head of cattle and some 300 head of hogs, 300 head of sheep and 200 goats.

"When we first began to plant our crops on a large scale we figured it would be no trouble to sell all the hay we could produce by simply offering our native cowpea hay for sale to the large feeders, but the people in this section, who are large users of hay, buy alfalfa and timothy, at a higher price, although the United States Government analysis shows the cowpea hay to be superior to either alfalfa or timothy hay.

"Two of the large mill owners, however, fed our cowpea hay, and they say that their stock never came through in such fine shape. The matter of feeding Florida native hay is one of education, and the people of this State need to give attention to it. The wholesale feed dealers of Jacksonville handle several thousand carloads of Northern hay, bringing some even from Canada annually, while a better hay from cowpeas and soy beans is now becoming available throughout the State. Once the Floridian begins to realize that he is sending his money north to pay for im-

ported feedstuffs not the equal of his own native crops, he will awake to the realization of how foolish he has been. He has been paying a premium for feed inferior to his own native feeds."

It has seemed worth while to go thus

CO-OPERATIVE FARMING BY LOCAL MEN.

The Anthony Farm and the big reclamation operations of Kyle and Young are matched in interest by the operations of the Palmetto Park Farm, owned by Z. C. Chambliss and T. T. Munroe and by the Powell & Chambliss Farm, also in the Ocala district. Mr. Chambliss is a banker who, like many other Florida people, came from Georgia. He is not only farming successfully, but he has established a co-operative system of farming which has some interesting features. Six years ago the owners put the Palmetto Park Farm into a five-year scheme with Mr. C. B. Strickland as manager. The manager put in no capital, but contributed his whole time without salary. He purchased a one-half interest in the work stock, cattle, hogs and sheep on time. Expenses of

fully into what this one farm, doubtless, as claimed, the largest of its kind in the State of Florida, is doing to prove that diversified farming, grain growing and live stock raising can be made to yield in the South far larger profits than in the West.

ured and divided equally annually between the owners and the manager.

The manager makes his plans in connection with the owners as to the variety and extent of crops. Having done this, he plans the crop acreage between small tenants, according to their family supply of labor, thus giving them the benefit of his knowledge of crops and his general directions. The tenants work and gather their own crop, but whenever necessary or feasible the different tenants work for each other for pay, in order to mass the whole work of the farm whenever needed upon the cultivation or gathering of any particular crop which needs to be handled promptly.

The various crops intended for shipment are gathered and delivered at a general packing-house managed by the owners. These crops are graded, packed and credited separately to the growers according to grades. The cars are loaded under one brand, and carloads are sold at the loading point each on its own merit. This results in carload shipments under an established known brand, but at the same time provides a pool which gives the best goods the best prices.

This is the system adopted in handling the early crops. As soon as they are gathered the land reverts at once from the tenants to the owners who have planted at the proper time a follow-up crop or crops, of which the following may be taken as an example: Cabbage planted in November and December are marketed from February to April; between each alternate row of cabbage corn is planted at the last plowing of the cabbage; at the last plowing of corn, cowpeas are planted between each corn row. The last crop which is left to mature is gathered from the fields by cattle and hogs, or sometimes gathered for seed or hay, as desired. This illustrates the method of getting two or three crops each year off the same land.

On this farm fields cropped one year are held for pasture the next, resulting in better pasture and the accumulation of humus and nitrogen for the coming crops



VELVET BEANS FOLLOWING TOMATOES ON THE PALMETTO PARK FARM, OCALA, FLA. THE VINES ARE FOUR FEET DEEP AND, AS WILL BE NOTED, COVER THE STUMPS AND PARTLY COVER THE TREES.

are made through bank by the manager, vouchers and statements going from the bank to the owners. The profits are fig-

of vegetables or staples. This farm carries a herd of about 50 registered short-horn cattle, the increase of which are



PICKING STRING BEANS ON LAND OF THE ANTHONY FARM CO. NEAR OCALA, FLA.

sold for breeding purposes, and a varying herd of about 100, to which is added by purchase for feeding off crops enough native cattle to make four to six carloads yearly. This farm also carries about 200 Berkshire and graded hogs. No feedstuffs are purchased. The rotation of crops is so planned that the stock is always on pasture.

At the end of the five-year period the manager had accumulated sufficient out of his earnings to want a farm of his own, and 300 acres were sold to him. But his farm and the remaining lands are held together under the same arrangement for another term of five years, the manager being allowed interest on his part of the investment. His lands receive the same treatment in the way of betterments given to the original farm.

The Howell & Chambliss Farm, located at Lowell, Fla., about 10 miles from Ocala, consists of 2300 acres. It is handled in much the same way as the Palmetto Farm, except that at the end of the five-year period Mr. C. B. Howell purchased a one-half interest in the land holdings, and receives now a salary equal to the interest on his investment. The larger part of both farms are unimproved, being covered by the original growth of hickory, gum, magnolia, iron wood, etc., and generally known as "Hammock," a term applied to hardwood lands. The aggregate sales from these two farms during 1912 footed up \$39,000. Mr. Chambliss and his associates are making farming profitable. They are not only raising grain and livestock, but also a wide variety of early vegetables. They make a rule not to take any chances on the shipments of vegetables. They sell on the spot whenever a carload is ready, preferring not to speculate on the fluctuations of Eastern or Western markets. Their system of co-operation by which each tenant is directed as to the crop to plant is very interesting, as it divides the acreage so as to have a variety of early vegetables which are cultivated and gathered at different periods. In this way practically the entire force can at any time be concentrated on any particular crop. This avoids the danger of cultivating a larger crop than can be gathered, and gives to each tenant an opportunity of working for pay on other crops than his own. As soon as the tenants have gathered all of the early crops, the gathering and packing of which are handled in a wholesale way, they have the opportunity of continuing to work during the balance of the year on the general crops to which the farm is devoted after the

early vegetables are out of the way. The tenants in this way are assured regularity of work and are directed by the best skill



MAKING HAY AT MUCLAN, FLA.

that the owners can give as to the kind of crops to raise.

Ocala in these agricultural developments is giving to the whole country an object-lesson as to how farming can be made profitable in Florida and demonstrating that general agriculture offers to the intelligent farmers from other sections better opportunities than can be found in the North or the West.

R. H. E.

Director William B. Phillips of the Bureau of Economic Geology of the University of Texas has published a blueprint map showing the location of all known deposits of brown ore in East Texas, of lignite mines in operation, of blast furnaces and of producing oil fields.

The Business Men's Club of Corinth, Miss., Rufus Jones, secretary, is interested in the construction of a pike from Corinth to Pittsburgh Landing, Tenn., a distance of 22 miles, of which about 12 miles will be built by private subscription.



CORN ON THE ANTHONY FARM, OCALA, FLA., WITH VICE-PRESIDENT HOWELL, WHO IS SIX FEET TALL, STANDING IN THE FIELD.

The Appalachian Power Co.'s Hydro-Electric Developments.

The progress which has been made in carrying on the hydro-electric developments of the Appalachian Power Co., on the New River, in Carroll and Pulaski counties, Virginia, is indicated in the accompanying illustrations showing the conditions at the time of the latest reports from the company, of which H. M. Bylesby of Chicago is president. The Appalachian Power Co. was organized in 1911 for the purpose of developing the water-power of the New River and distributing it by electric transmission throughout Southwestern Virginia and Southern West Virginia. The company has acquired five separate power sites, aggregating a total fall of 225 feet, producing between 75,000 and 100,000 horse-power. Two of these power sites now in process of development, which together will produce 20,000 horse-power, are known as developments No. 2 and No. 4.

The territory centering on these power developments is rich in many varieties of minerals. It includes the famous Pocahontas coal fields, together with iron mines, zinc, copper, salt and gypsum mines and glass sand, many varieties of clay and other minerals. The availability of water-power for use in connection with the development of these properties will undoubtedly stimulate the industrial growth of the various communities served.

In addition to the mining developments, the location is well adapted to the establishment of cotton mills, woodworking plants and other industries. The territory is well provided with transportation facilities by the Norfolk & Western, Virginian, Southern and Chesapeake & Ohio railroads. The construction of modern highways is making good progress in this section, several hundred miles having already been built. During the past 10 years all the towns and cities in the territory have shown a rapid growth in population and commercial activity.

The Appalachian Power Co. has already acquired the electrical properties in the towns of Marion, Wytheville, Pulaski, Bluefield, Pocahontas, Welch and Keystone, all within 50 miles of the power developments. The electric lighting, railway and power systems of these towns will be provided with power from the developments now under construction.

High-tension transmission lines are being built from these developments to the Pocahontas coal fields, to Bluefield and to Roanoke, and such lines will also be constructed to Martinsville and Danville toward the southeast and to Saltville farther west. These high-tension lines will operate at 88,000 volts, and will feed substations at the various load centers, which will lower the voltage for distribution through secondary lines to the various power consumers. At the present time substations are being built for operation by these high-tension transmission lines at Roanoke, Pulaski, Bluefield, Switchback, Coalwood and Saltville. In addition, there will be a number of low-tension substations located at the various centers of load in the coal fields, and at Wytheville and Galax contracts for delivery of power have already been secured; also from the Roanoke Railway & Light Co. at Roanoke, Va.; the Pocahontas Consolidated Collieries in the coal fields, the Virginia-Pocahontas Coal & Coke Co., the American Coal & Coke Co., the Zenith Coal & Coke Co., the Crystal Coal & Coke Co., the West Virginia-Pocahontas Company, the Coalde mines and other operations in the coal fields. By the terms of the contract with the Pocahontas Consolidated Collieries Co. the power company acquired the use of its 7500-horse-power steam plant at Switchback, W. Va., which will be used as a reserve and to supplement the power from the hydraulic developments. This steam reserve will be in addition to that available from the various steam plants of the utilities purchased by the power company and also to the steam power available from the steam plant of the Roanoke Railway & Light Co.

Development No. 2, which is now under construction, consists of an overflow dam 50 feet in height, of solid concrete, built directly across the New River. The power-house is located in one end of this dam, and an auxiliary spillway above the power-house is being constructed by cutting through a ridge into a natural sluice beyond the ridge. This will save 200 feet in the length of the dam. This power-house will contain four 5000-horse-power vertical shaft units. The water-wheels are of the single-runner Francis type, and the electrical generators are of the alter-

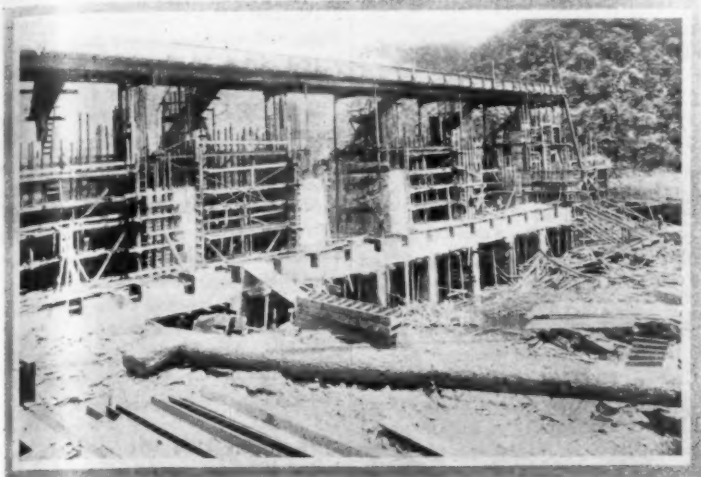
ating-current revolving field type. The water-wheels will discharge through concrete draft tubes into the tailrace excavated out of the solid rock in the river bed, as shown in one of the accompanying illustrations. Flashboards and Tainter gates will be placed on the top of the spillway for the purpose of storing water and regulating the head. The water-wheels operate at a speed of 116 revolutions per minute. Ample storage is available above the dam for operation of the plant at any daily load.

Development No. 4 as constructed is

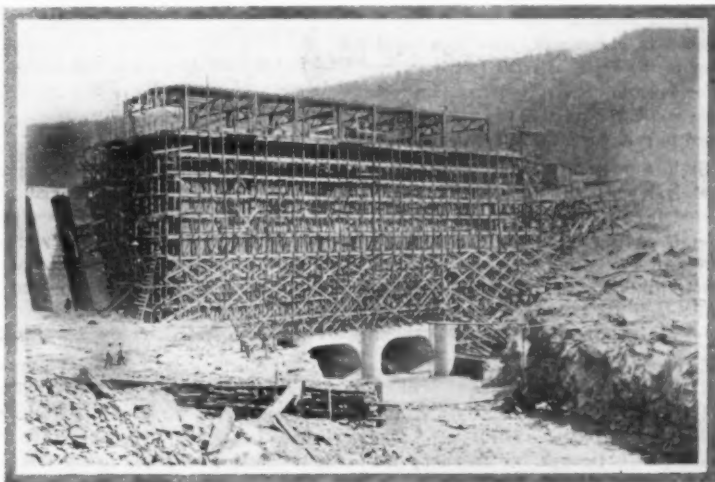
cal energy from both power-houses is carried by overhead line directly to the step-up transformer-house adjacent to Development No. 2. Here the electric current is transformed to 88,000 volts and distributed over the high-tension transmission system. This transformer-house is designed for ultimate extension, so that all of the power from Developments Nos. 1, 2, 3 and 4 will concentrate in this transformer-house, and be regulated and distributed from there. The equipment of this step-up transformer station will comprise four 6000-kilowatt water-cooled

electrical equipment is being furnished by the General Electric Co. of Schenectady. On account of the raising of the level of the water in the river by the construction of No. 2 dam, it has been necessary to reconstruct at a higher level about four miles of the North Carolina branch of the Norfolk & Western Railroad adjacent to No. 2 Development. This work is now practically completed. The construction work on the power-houses, transmission lines and substations is well advanced, and it is expected that the power-house No. 4 will be started in operation August 1,

to start up a new plant or factory is to couple up the transformers and electric motors required for driving the various appliances. The application of hydro-electric power to coal mining will also increase the output of coal from the coal fields. Through the influence of this power in the general development of the territory served the demand for coal for various purposes other than the production of power will, it is believed, greatly increase the use of coal in the territory. This tendency has been demonstrated in many communities served with hydro-



SUBSTRUCTURE OF NO. 2 POWER-HOUSE.



NO. 4 POWER-HOUSE, SHOWING WATER GATES AND DRAFT TUBE OUTLETS.



VIEW OF SPILLWAY DAM, DEVELOPMENT NO. 4.

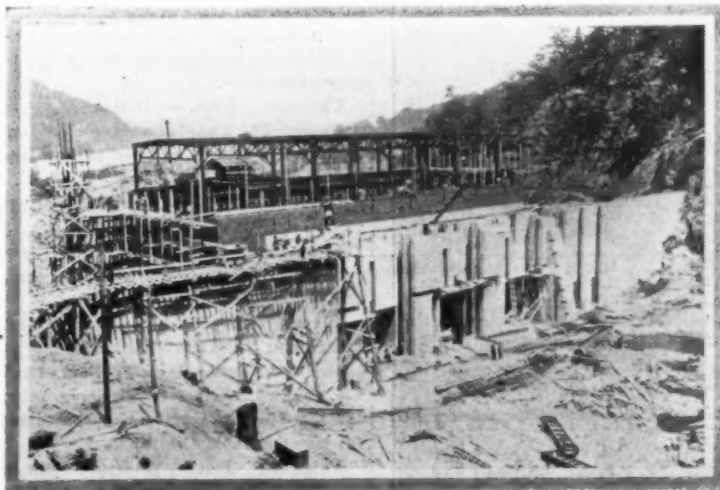


TAIL-RACE EXCAVATION, DEVELOPMENT NO. 2.

connected with an island in the New River. The spillway dam shown in one of the accompanying illustrations on this development work is approximately 1000 feet in length, and is constructed across the main channel of the river at the head of the island. This spillway dam will be completed about July 15, and will serve to divert the water into a natural head-race on the north side of the island, at the foot of which a retaining dam and power-house are constructed. This power-house, together with waste gates and draft-tube outlets, are shown in one of the illustrations. The construction of this plant is of solid concrete, with a brick and steel superstructure for the power-house.

The equipment of the power-house comprises three 3000-horse-power units, the water-wheels being vertical shaft, single runner, Francis type, and the generators internal-revolving field type, wound for 13,200 volts, three-phase, 60-cycle, at a speed of 97 revolutions per minute. The excavation of the tail-race at Development No. 4 required the removal of 66,000 cubic yards of rock.

The switchboard apparatus in power-houses Nos. 2 and 4 controls only the generators in the two power-houses. Electric



NO. 4 POWER-HOUSE, SHOWING RETAINING DAM AND INLETS TO WATER WHEELS.

three-phase transformers, wound for 13,000 volts primary and 88,000 volts secondary, together with the various regulating and controlling devices.

The water-wheels in both Developments Nos. 2 and 4 are supplied by the I. P. Morris Company, Philadelphia, and the

1912, and power-house No. 2 in October, 1912.

The availability of electric power at low cost throughout Southwest Virginia will stimulate to a great extent its industrial development. By purchasing hydro-electric power, all that is necessary in order

electric power, notably the district surrounding Niagara Falls and Buffalo. Here the consumption of coal at present is very much greater than it was before 500,000 horse-power was developed by water-power and used in that community.

The Appalachian Power Co. is under the management of H. M. Byllesby & Co., through Mr. H. W. Fuller, vice-president and general manager, with headquarters at Bluefield, W. Va. Viele, Blackwell & Buck of New York are the consulting engineers in charge of construction of Developments Nos. 2 and 4, and the high-tension transmission lines and high-tension substations. H. M. Byllesby & Co. are in charge of the engineering and construction in connection with the various electric plants purchased by the power company, and the low-tension substations and the distribution system throughout the coal fields.

Under the auspices of the Farmers' Union and the Chamber of Commerce of Sumter, S. C., A. V. Snell, secretary, arrangements have been made by the banks of Sumter for the carrying from October 1 to May 1 of enough cotton to make effective a system of gradual marketing of the staple.

Water in Eastern Virginia.

By A. JEFFERS, Oceana, Va.

Water in Eastern Virginia for domestic purposes and for farm stock is easily and economically secured in abundant supply and good quality. The wells are either dug or driven to the depth of 15 to 40 feet, and an abundant supply of good pure soft water is thus secured, sufficient for all ordinary purposes, but not sufficient for manufacturing and industrial purposes. In order to secure a supply sufficient in quantity and at the same time free from chemical elements injurious to the boilers, deeper wells have been bored, even to the depth of 2000 feet or more, going down to the granite foundation rock upon which the crust of the earth is supposed to rest, down to the igneous rock.

Such a well is now being bored in Berkely, a suburb of Norfolk. The attention of the writer was called to this well recently and a visit was made, principally with a view to learning the different strata penetrated by the work. The "log" of the well referred to is herewith given briefly. It shows the thickness of the different strata penetrated.

The well was sunk in a section which had been filled in for many years, and which was originally under water. The strata passed through, as shown by the "log" kept by the engineer, follows:

14 feet of made or artificial land.
18 feet white sand.
70 feet blue mud.
24 feet fine blue sand.
128 feet light blue marl.
48 feet light blue marl with sand in it.
1 foot rock strata.
260 feet green sand marl with shells.
30 feet fine sand with black particles in it.
165 feet green marl, no shells in it.
1 foot rock strata.
11 feet black sand with flowing water.
72 feet clay or gumbo.
1 foot rock.
21 feet red, blue and green clay.
6 feet hard shell rock.

36 feet light gray sandy marl.
12 feet light gray marl, no sand.
2 feet rock resembling granite.
30 feet red and gray clay, with traces of coal.
3 feet gray sand rock.
19 feet clay with boulders in lower edge of strata.
8 feet red clay with gravel.
2 feet shell rock.
6 feet gray clay.
22 feet red and gray clay, with boulders and lumps of pure white lime; petrified wood.
37 feet gray fine sand with water.

At this depth there is a flow of water which if of sufficient quantity and all right as regards quality, will answer the purpose for which the well is constructed. If otherwise, the boring is to be continued to the limit of human ability and ingenuity.

More than 400 wells of different depths have been driven in Eastern Virginia. The number is increasing yearly. The granite rock crops out at the falls of the Potomac, James and Rappahannock, and then the rocky floor seems to dip sharply and rapidly to the southeastward to the sea, so that at the seashore the granite bed rock is 2500 or more feet below the surface. The earth strata also seems to dip in the same general direction, and wherever a bed of water bearing sand lies just above a strata of clay that is impervious to water, artesian or flowing wells may be had. Experimental work is being done at several points with varying results, but it is to be hoped, in fact is expected, that sooner or later an ample supply of subterranean waters will be found sufficient in quantity and satisfactory in quality to supply the millions that are to occupy Eastern Virginia when it is properly developed and its industrial and agricultural interests properly promoted.



THE NEW MURPHY HOTEL, RICHMOND, VA.

To be erected for Col. John T. Murphy; 130x93 feet; 12 stories; about 400 rooms; steam heat; electric lighting; tile roof; cost \$500,000; architect, John Kevan Peebles, Norfolk; contractor, F. T. Nesbit & Co., New York and Washington.

GOOD ROADS

WEEK'S HIGHWAY RECORD.

Progress in Southern Road and Street Improvement.

[Full details of highway undertakings are given in the Construction Department.]

Bonds Voted.

Cordele, Ga.—City voted \$95,000 bond issue for paving, etc.
Heflin, Ala.—Cleburne county voted bond issue for road construction.
Mannington, W. Va.—Mannington district voted \$300,000 bond issue for road improvements.
Marshall, Tex.—City voted \$28,000 bond issue to macadamize streets.
Palm Beach, Fla.—City voted \$85,000 bond issue to construct ocean boulevard.
West Plains, Mo.—West Point road district of Howell county voted \$30,000 bond issue to build rock roads.

Bonds to Be Voted.

Abilene, Tex.—City votes July 29 on \$30,000 bond issue to improve streets.
Franklin, Tex.—Precinct No. 2 of Robertson county will vote July 18 on \$150,000 bond issue for road construction.
Gretna, La.—Jefferson Parish Police Jury authorized formation of two road districts to vote July 16 on \$125,000 bond issue to construct roads aggregating 20 miles.
Kaufman, Tex.—Kaufman county votes June 29 on \$200,000 bond issue for road construction.
Miami, Fla.—City votes August 27 on \$20,000 bond issue to open, widen and build streets and sidewalks.
Richmond, Va.—Road district No. 2 votes on \$150,000 bond issue for road construction.
Sherman, Tex.—City votes July 25 on \$198,000 bond issue to pave streets, etc.
West Palm Beach, Fla.—Townships 44 and 45 of Palm Beach county vote July 23 on \$60,000 bond issue to widen county road and build Atlantic boulevard.

Contracts Awarded.

Baltimore, Md.—City awarded five contracts for street paving.
Baltimore, Md.—City awarded contract for vitrified block paving; contract No. 21, at \$8069; contract No. 22, at \$7436; contract No. 23, at \$5353.
Benton, Tex.—Polk County Commissioners awarded contract to grade and macadamize road seven miles; roadbed 16 feet wide; 8 feet to be macadamized with 6 inches of stone or slag and 4 inches of top dressing.
Charlotte, Tenn.—Dickson County Turnpike Co. awarded contract to construct road from Charlotte to Dickson, eight miles.
Crowley, La.—City awarded contract to pave 30,000 square yards.
Gainesville, Ga.—City awarded contract to pave Main street with bitulithic; cost \$40,000.
Gilmer, Tex.—Upshur county awarded contract to construct 50 miles road.
Houston, Tex.—Magnolia Park Land Co. awarded contract for grubbing, blowing out stumps, grading and excavating for street work in Central Park.
Palestine, Tex.—Anderson county awarded contract to construct about 20 miles of sand-clay roads; cost about \$40,000.
Paris, Tex.—Lamar county awarded contract for road construction; 40 to 48 miles rock roads; \$240,000 available.

Contracts to Be Awarded.

Atlanta, Ga.—City will pave McLendon street with vitrified brick between tracks of Georgia Railway & Electric Co., about 2300 square yards; and outside tracks

with asphaltic macadam, about 7000 square yards.

Baltimore, Md.—City will pave streets included in contract No. 32; 33,150 square yards with sheet asphalt or bituminous concrete and 1330 square yards with vitrified block.

Baltimore, Md.—City receives bids July 3 for paving with sheet asphalt 5600 square yards.

Baltimore, Md.—City receives bids July 3 to construct roadway on Back River disposal plant.

Carbon Hill, Ala.—City will lay concrete sidewalks on main business streets.

Decatur, Ala.—City will pave Lafayette street and macadamize old Danville road.

Huntington, W. Va.—City receives bids July 22 for grading, curbing and paving with vitrified brick certain streets and several alleys.

McAlester, Okla.—City will grade, gutter, curb, drain and pave several streets.

McAlester, Okla.—City receives bids July 5 for grading, paving, curbing and guttering South Main street; improvements to consist of concrete pavement 6 inches thick, concrete curbs and gutters; width 30 feet between curbs.

Mobile, Ala.—Mobile county receives bids July 11 for constructing 10 miles Cedar Point road.

Paducah, Ky.—Board of Public Works receives proposals July 1 for paving work, including about 26,000 square feet concrete sidewalks, 1850 square feet concrete driveways, 4900 linear feet concrete gutters, 5000 linear feet granite curbing and 200 linear feet cast-iron drain pipe.

Portsmouth, Va.—City receives bids July 2 for paving with vitrified brick on 5-inch concrete base roadway of 1st street.

Rustburg, Va.—Campbell county appropriated \$4150 to macadamize Langhorne's Road.

Shreveport, La.—City received bids until June 25 for laying sidewalks and curbing during one year, estimated as follows: 50,000 square feet sidewalks, 20,000 linear feet curbing and 3000 cubic yards earth.

Tazewell, Va.—Tazewell county receives bids July 9 for grading about 18 miles of road.

Victoria, Tex.—Victoria county received bids until June 25 for constructing 24 miles gravel roads in road district No. 2.

Washington, D. C.—Government will grade certain streets, aggregating 102,000 cubic yards; also lay cement sidewalks.

BINDERS FOR MACADAM ROADS.

Important Uses of Asphalt Noted in Report of Geological Survey.

A by-product of the oil industry is fast supplying the demands for asphalt in the United States. Asphalt commerce has always been guided rather by the uses to which the material could be put than by the discovery of new deposits. Thus asphalt was first brought to this country from the region of the Dead Sea and elsewhere in the East for making asphalt varnish, and especially for "japanning" metals. Asphalt found in an impure mixture with water and clay in the great asphalt lake of Trinidad has been used in large quantities for street paving.

More recently the petroleum from California and Texas have furnished, in the course of their utilization, large supplies of asphaltic residues. A man who has shown his genius in many other lines, Walter P. Jenney, was among the first to conceive the idea that this asphaltic material could be "Bessemerized"—that is, blown with air in a way that would make it sticky and even elastic to a certain extent. Elastic material for roofing and even substitutes for rubber in automobile

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tires have been obtained from asphaltic residues by this blowing process or by treating with sulphur. This sulphurization of asphalt has even been applied with good effect to elaterite and similar hard asphalts from Eastern Utah. The extension of this interesting Bessemerizing process holds out attractive possibilities—for example, that the same raw material may be used in both the elastic tire of the automobile and the road over which it runs.

The chief feature of the asphalt industry in 1911, as shown by an advance chapter from "Mineral Resources," published by the United States Geological Survey, "The Production of Asphalt, Related Bitumens and Bituminous Rock," by David T. Day, is the great extension of the use of residues from the asphaltic varieties of petroleum as binders in the surfaces of macadam roads in order to prevent the rapid deterioration of these roads from automobile traffic. The asphalt used for this purpose showed a gain in quantity from 139,424 tons in 1910 to 234,951 tons in 1911. It is noted also that the importation of soft asphalt from Venezuela, which is admirably suited for this purpose, is increasing.

\$300,000 for Good Roads.

Mannington, W. Va., has voted a special bond issue of \$300,000 upon Mannington district for permanent brick road improvement. Mannington has 5000 inhabitants; it is 60 miles east of Wheeling, on the main line of the Baltimore & Ohio Railroad, and in the center of the oil and gas business of northern West Virginia and of the Pittsburgh coal district. It has five miles of paved streets, good manufacturing industries and fine schools and churches. The bonds, which will be the first indebtedness of any kind against the district, which has a taxable valuation of \$14,000,000, will run for 25 years, and will bear interest not to exceed 5 per cent.

FOREIGN NEEDS

Machinery and equipment wanted abroad are mentioned in many letters received by the MANUFACTURERS RECORD, which is so widely read in foreign countries that we are in constant receipt of many letters from all parts of the world. For the benefit of our subscribers seeking foreign trade we publish the following extracts from recent letters:

Type-Foundry Machinery.

Technisches Bureau, Victor Kraus and Max Heller, No. 2 Jungmannstrasse, Prag-Kgl. Weinberge, Austria-Hungary, writes to the MANUFACTURERS RECORD: "We have long been desirous of putting American machinery in the hands of our customers. Up to this time we have not been able to get addresses of suitable parties in order to get in direct commercial contact with the best American firms producing such goods as we desire. At the present moment we are particularly interested in equipments and installations for type foundries and similar work. We are ready to take hold of any kind of American machinery that is novel and capable of doing special work of any kind. We can find a market for them easily."

Machinery for Weaving.

Arnon & Roux, 141 Rue de Javel, Paris, France, write to the MANUFACTURERS RECORD as follows:

"Kindly let us know if you can find us a constructor having machines making the work as per sample." (Sample is fabric woven with cord.)

RAILROADS

[A complete record of all new railroad building in the South will be found in the Construction Department.]

SEABOARD AIR LINE WORK.

Shops, Warehouse and Other Expensive Improvements at Several Places.

The Seaboard Air Line has under contract several important pieces of terminal and warehouse construction, some of them running high into the thousands in the matter of cost. Official information reveals interesting particulars.

At Cayce, near Columbia, S. C., the company is spending for new shops and yard \$114,850, including the following: Ten-stall reinforced-concrete roundhouse, \$22,450; machine shop, 41x45 feet, \$2200; E. 50 turntable, 85 feet long, \$9000; yardmaster's office, \$1800; combination oil and storehouse, \$1600; cinder pit, \$3000; 50,000-gallon reinforced water tank, \$1900; fire protection, \$5000; track work in yard, \$60,000; machinery and tools, \$7900. Fairbanks, Morse & Co. of Chicago are contractors for the buildings, and B. F. Langford of Jacksonville, Fla., for the tracks.

At Jacksonville, Fla., the Hogan-street terminal improvements will cost \$158,000, thus: Frame warehouse, 84x445 feet, \$66,000; frame warehouse, 113x385 feet, \$57,000; dredging, \$15,000; dock work (13,500 square feet), \$10,000; track work (inclined track on trestle), \$10,000. Burwell & Hillyer of Jacksonville are contractors for the buildings, and the Coastwise Dredging Co. of Norfolk for the dredging.

At the Savannah (Ga.) shops \$64,000 will be expended when all is done, and this work is approaching completion. There will be a machine, boiler, blacksmith and erecting shop, \$38,000; a roundhouse and outside pits, \$20,000, and a power-house, \$6000. Fairbanks, Morse & Co. of Chicago are the contractors.

The cotton terminal at Hatcher's Island, Savannah, will require a total expenditure of \$51,000, thus: Two brick warehouses, 82x352 feet, \$45,000; platform, 17,575 square feet, \$3000; tracks, \$3000. The Elliott Building Co., Hickory, N. C., is the contractor.

A \$5,000,000 TERMINAL.

Dallas, Tex., to Gather Eight Railroads Under One Trainshed.

After a lengthy conference of representatives of the various trunk lines interested, Col. F. G. Pettibone, president of the Union Terminal Co., Dallas, Tex., announced that work will begin probably within three months upon the construction of a new union depot at Dallas, which improvement will cost altogether about \$5,000,000. This will cover, it is said, the whole of the many expenditures necessary.

Among the lines interested are the Santa Fe, of which Colonel Pettibone is vice-president and general manager at Galveston; the Southern Pacific, the Rock Island, the Frisco, the Missouri, Kansas & Texas, the Texas & Pacific, the Trinity & Brazos Valley and the St. Louis Southwestern. Offices for the terminal company will be opened at Dallas, with Murrell L. Buckner, secretary in charge. Other officers of it are: Vice-presidents, Thornwell Fay and W. A. Webb; treasurer, R. P. Roach. The executive committee is composed of W. C. Connor, J. W. Robbins, C. W. Jones, J. W. Everman and F. G. Pettibone, ex-officio. There will be 16 directors, two from each of the above-named roads.

At present there are five passenger sta-

tions in Dallas, but when the new terminal is finished there will be only one. Several sites are under consideration, but a choice will not be announced until the property desired is really bought. Besides the station and terminal and yard tracks, there will be constructed shops, power plant and roundhouses of ample capacity. It is estimated that about two years will be required to complete the work. About 36 acres of land will be occupied. There is no present intention to build a belt line or to enlarge the freight facilities. The financing is assured.

It is further stated that plans and specifications for the depot will be prepared immediately, and that Charles H. Dana will be chief engineer in charge of construction. Secretary Buckner will handle details.

\$1,500,000 COAL PIER.

Chesapeake & Ohio to Build Costly Structure at Newport News, Va.

The Chesapeake & Ohio Railway Co.'s directors have approved plans for the coal pier recently announced as to be built at Newport News. Preparations are being made to begin construction, and M. J. Caples, fourth vice-president of the company, wires the MANUFACTURERS RECORD the essential details as follows:

"Our Newport News pier will have 1200 feet of berth room on each side; it will be 90 feet high and will have a dumping capacity of something over 3000 tons per hour. Pier will be built of steel on concrete foundations; cars will be raised to the top of the pier by two elevators separately operated. There will be two dumping machines similar to those used in unloading coal into vessels on the Great Lakes. Estimated cost of the pier is \$1,500,000. Expect to have it completed in 18 months."

NEW BIRMINGHAM RAILWAY.

Kelley Company Seeks Franchise for Beginning of District System.

The Kelley Street Railway Co. has applied for a franchise at Birmingham, Ala., and the application has been taken under consideration by the City Commissioners. George C. Kelley of the Kelley Company, engineer, First National Bank Building, Birmingham, is promoting the new company, and the application was filed by Nat L. Miller, attorney. This firm says it is intended to build an independent and complete modern electric street-railway system covering about 12 miles of streets.

Mr. Kelley is quoted saying that the central point on the system will be 20th street and Third avenue, and it is proposed to build a viaduct over the steam railroad tracks to reach the south side of the city. The lines will extend to the South Highlands, terminating at Niazuma avenue and Linden street. Another branch will extend to the Phoenix Club on 20th street. On the North Side they will also pass through Norwood and West Highlands.

The promoter had previous street-railway experience. Some years ago he built the East Birmingham & Gate City Railway, and was its president before its consolidation with the Birmingham Railway, Light & Power Co. He says he is backed in this new enterprise by Eastern capital, and that if the franchise is granted the proposed lines will surely be built. A decision from the City Commissioners is expected before the end of the month.

Mr. Kelley is further reported as saying that the construction of the lines for which application has been made is only part of the plans of the backers. This work will form only the nucleus of a sys-

tem which is to run through the Birmingham district.

Grafton, Fairmont & Clarksburg.

H. P. Keenan, Boothsville, W. Va., a member of the finance committee of the Grafton, Fairmont & Clarksburg Railroad Co., says it is to build a line from 30 to 35 miles long connecting Grafton, Fairmont, Clarksburg and Boothsville. It will make a route from Fairmont to Boothsville to Grafton, and also from Boothsville to Clarksburg, W. Va. There will be two or three large bridges over the Valley River and five bridges over creeks. The route lies through both rolling and level country, and the heaviest grade will be 5 per cent. The region is rich in agriculture, as well as in mineral and other natural resources. Connection will be made with the lines of the Grafton Traction Co., the Fairmont & Clarksburg Traction Co. and the Union Utilities Co. It is desired to begin construction before next winter.

Charles F. Sutherland, Morgantown, W. Va., is president of the railroad company; A. E. N. Means of Grafton is vice-president; A. B. Corder of Bridgeport is treasurer; Eugene Sommerville of Grafton, secretary; J. M. Roberts, Room 35 Shannon Building, Pittsburgh, Pa., general manager and chief engineer. Others interested are B. F. Bailey of Grafton; C. Lee Reynolds of Flemington, W. Va.; A. Stacey of Fairmont, Leo Kenedy and H. P. Keenan of Boothsville, M. W. Mead of Pittsburgh, Charles C. Benton of Philadelphia and Henry Molz of Kittanning, Pa. Besides Mr. Keenan, the finance committee is composed of Messrs. Corder, Roberts, Reynolds and Sutherland.

New Equipment, Rails, Etc.

Pennsylvania Railroad Lines West have ordered 13 locomotives from the Lima Locomotive Co., Lima, O., and 37 locomotives from the Altoona shops of the railroad company. The Pennsylvania east has ordered 21 freight and 10 switch engines from Altoona.

Louisville & Nashville Railroad, according to a report from Birmingham, has ordered 12,600 tons additional of open-hearth rails from the Tennessee Coal, Iron & Railroad Co.

Meridian & Memphis Railway Co., Meridian, Miss., is ready to award contracts for 35 miles of new 60-pound steel rails, with fastenings, to be delivered at Meridian, shipments to be made from August to December.

A report from Birmingham says that the Southern Pacific has ordered a total of 19,752 tons of rails from the Tennessee Coal, Iron & Railroad Co. Of this amount a shipment of 6025 tons for the Union Pacific road has just been forwarded.

Shreveport (La.) Traction Co., says a report, has ordered five cars from the American Car Co., St. Louis.

Roanoke Railway & Electric Co. has ordered six pay-as-you-enter cars from the St. Louis Car Co. The road will also rebuild some of its cars.

Illinois Central Railroad is reported getting prices on 50 Mikado, 20 Pacific and 18 switching locomotives.

Southern Pacific is reported to have ordered nine electric locomotives from the Westinghouse Electric Co., Pittsburgh.

Chattanooga Iron & Coal Co., says a market report, has ordered two four-wheel saddle-tank locomotives from the Vulcan Iron Works, Wilkes-Barre, Pa.

Missouri, Kansas & Texas and the Rock Island are reported in the market for steel to repair equipment.

Pennsylvania Railroad will build 875 refrigerator cars at Altoona.

Chesapeake & Ohio Railway is reported

to have placed an order for 25 more Mikado locomotives, making 75 ordered recently.

Kanawha & Michigan Railway will buy three passenger cars.

Seaboard Air Line, says a report, has ordered 25 cabooses from the Mt. Vernon (Ill.) Car Co.

Alabama, Tennessee & Northern has filed equipment mortgage covering 150 steel underframe box cars, 40 steel underframe gondola or coal cars, 60 steel underframe flat cars, a locomotive, 2 passenger cars, 2 combination cars and a private car.

Norfolk & Western is reported to have ordered 1000 steel coal cars from the Virginia Bridge and Iron Works, Roanoke, Va.

Central of Georgia is reported in the market for 15 Mikado type locomotives.

Houston Belt & Terminal is reported to have ordered from the Baldwin Works, Philadelphia, two six-wheel switching locomotives.

Greenville (S. C.) Traction Co. has bought several cars from the Anderson Traction Co.

Seaboard's total equipment purchases recently are thus described: 25 locomotives, 30 all-steel passenger train cars, 1200 steel-frame freight cars, 25 steel-frame cabooses and 125 miles of 85-pound steel rails. Steam ditchers, derrick cars, etc., for road work have also been purchased.

Through a Growing Section.

[Special Cor. Manufacturers Record.]

Laurinburg, N. C., June 22.

The new owners of the Wilmington, Brunswick & Southern Railroad proposes to put its lines in first-class condition and as soon as possible to establish a regular passenger and freight schedule. Additional equipment will be purchased, including locomotives and cars. The line at present runs from Navassa to Southport, N. C., 30 miles, but it will have trackage into Wilmington, four miles more. There will also be terminal facilities at Southport.

John F. McNair of Laurinburg is first vice-president, as previously noted. Others interested are M. J. Corbett, H. C. McQueen, Z. W. Whitehead, Oscar Pearsall, Morrison Devine, C. W. Taylor, Walker Taylor, J. W. Brooks and J. A. Springer, all of Wilmington; A. J. McKinnon of Maxton, N. C., and Martin McKinnon of Red Springs, N. C. Mr. Corbett is president.

This railroad extends through an excellent farming as well as a finely timbered section, there now being located on its line four sawmill plants, with a fifth under way, also a shingle mill with a capacity of 60,000 shingles per day; the timber includes both pine and hardwood.

It has been stated that Southport is in a direct line with the Panama Canal, and with the fine harbor facilities offered there the prospects for the Wilmington, Brunswick & Southern Railroad are very good. Besides, it is possible that coal terminals will be built at Southport in connection with the other railroad improvements.

J. LOUIS SPENCER.

B. & O. Shows Steady Progress.

The official statement of the Baltimore & Ohio Railroad's earnings and expenses, exclusive of outside operations, for May, 1912, and for the 11 months of the company's fiscal year to May 31, reveals steady progress. In May the operating revenue was \$8,252,995, increase as compared with the same month of last year \$734,959; total operating expenses \$5,529,634, increase \$559,410; net operating revenue \$2,723,361, increase \$175,549.

During the 11 months from July 1, 1911, to May 31, 1912, the operating revenue was \$84,279,490, increase \$3,596,195; total operating expenses \$58,869,221, increase \$1,303,133; net operating revenue \$25,410,269, increase \$2,293,062.

The above statement does not include outside operations of the company, which, as estimated, will exhibit a deficit in net for May of \$60,000, and for the 11 months of \$604,938. Last year in outside operations there was a net revenue of \$820 for May, and a deficit of \$122,203 for the 11 months.

Atlanta-Macon Interurban.

A special dispatch from Atlanta says that Hollins N. Randolph of that city, secretary of the Atlanta & Macon Railways Co., has applied to the Georgia authorities to increase its capitalization from \$100,000 to \$3,600,000, it being proposed, after the amendment to the charter is granted, to begin construction of the projected electric interurban railway from Atlanta to Macon, about 88 miles. The third-rail system is to be used. Contracts for the entire construction will be let through the South Atlantic Contracting & Construction Co., Brown-Randolph Building, Atlanta, Ga.

Another report says that the interurban railway will have its Atlanta terminal on Exchange place, opposite the Equitable Building. The tracks will be on Gilmer, Butler, Fraser, Little and Martin streets, Atlanta avenue and Hill street, following the latter to the city limits. The estimated cost of construction is \$4,000,000, and work is expected to start in about a month.

Kansas City Industrial Line.

H. L. Harmon, 415 Midland Building, Kansas City, Mo., president of the Kansas City Industrial Railway Co., recently chartered, says that seven and one-half miles of track are to be constructed from 15th and Indiana streets to Woodland and 47th streets. The line will have practically a water-level grade. Connections are to be made with the Rock Island, the Frisco, Missouri Pacific and Kansas City Southern roads. Before construction can begin a franchise ordinance must first be passed by the city to give the right to cross the streets and alleys. No grade crossings are to be permitted. Other officers of the company are: William T. Johnson, vice-president; A. L. Cooper, secretary. Other incorporators and directors are Thomas Stinson, John E. Wilson, William C. Lucas and John S. Wright, all of Kansas City.

Proposed Road in North Carolina.

According to reports from Southern Pines, N. C., engineers have been investigating near there with a view toward constructing a railroad from Greensboro to Southport, N. C., with connections to the Chesapeake & Ohio and the Norfolk & Western railroads. No names are mentioned in connection with the reported enterprise, but it is said that the route contemplated is from Greensboro via Cuthage, Southern Pines, Raeford, Lumberton and other points to Southport, which is at the mouth of the Cape Fear River. The Randolph & Cumberland Railroad Co., it may be observed, proposes an extension over at least part of this route.

Live Oak Improvements.

A letter says that the Live Oak, Perry & Gulf Railroad Co., with headquarters at Live Oak, Fla., has recently been refinanced, and a new bond issue has been made, enabling the company to retire all the old bonds and indebtedness and re-

serve \$100,000 for additions and betterments.

It is not understood that the company will build any more new lines just at this time, but it is proposed to rebuild a considerable part of the road, reducing grades and curves in a number of places and laying a considerable amount of heavier rail, besides otherwise materially bettering the condition of the property.

The company has also established in connection with its affairs a land office, which is working for the development of the country along the line. A great number of people have come from the North and West and have purchased farms, and the road is doing everything it can, it is stated, to assist in the improvement of the region in an agricultural way.

A Public Service Company.

The Continental Public Service Co., capital \$50,000,000, has been incorporated at Wilmington, Del., to conduct a general business in public utilities and construct, maintain and operate railways, wharves, docks, ferries, electric-light and gas plants; also to acquire and hold real estate and to secure franchises. The stock is divided into \$30,000,000 of common and \$20,000,000 of preferred. It is not stated where the company will conduct its business, and the incorporators named are apparently only temporary representatives of the backers of the enterprise. E. E. McWhiney, Wm. J. Maloney and Norman Coffin, all of Wilmington, are named.

Suburban Line to Be Acquired.

The Birmingham & Edgewood Street Railway, according to a report from Birmingham, Ala., is about to be purchased by the Birmingham Railway, Light & Power Co., an ordinance approving the deal having been passed by the City Commissioners. The line was built by G. T. Brazelton, Stephen Smith and others, and cost, it is said, about \$85,000. It is about four miles long from Birmingham over Red Mountain to Edgewood, a suburb. An extension of about three blocks will be built by the purchasing company to connect the Edgewood line with the city system.

Contract to Improve Line.

The Flint River & Northeastern Railroad Co. has awarded a contract to John F. Lamb of Thomasville, Ga., for grade reduction, making fills and surfacing line between Pelham and Doerun, Ga. It is estimated that there will be about 50,000 yards of earth to handle. This road is now being relaid with 65-pound rails for a distance of 23 miles, and numerous other improvements are being made to the property, including the erection of adequate freight and passenger facilities at Pelham, Ga.

Cochrane's Lines Joined.

The Alabama, Tennessee & Northern and the Tombigbee Valley railroads, which have been under construction for several years in the western part of Alabama, the former building southward from Reform, and the latter north from Calvert, Ala., have just been connected, making a through line of 200 miles between terminals. John T. Cochrane of Mobile is president of both roads, and Wm. G. Cochrane is vice-president.

Seaboard Improvements.

Concerning the proposed improvements to its Sarasota line in Florida, C. A. Hix, vice-president and general manager of the Seaboard Air Line, Portsmouth, Va., says that everything possible will be done to put that road in thoroughly good condition. He has already placed an extra

force of men on it with instructions to go over every foot of the track and put it in as good shape as can be done on the rail there.

\$300,000 for Shops.

J. J. Harrison, chief engineer of the Fidelity Construction Co., Muskogee, Okla., contractor for the Missouri, Oklahoma & Gulf Railroad, says they are going to spend about \$300,000 for shops in the near future, but plans are not completed and the location is not fully decided upon.

Railroad Notes.

The Western Maryland Railroad proposes to open its Connellsville extension for freight traffic on August 1.

Maryland & Pennsylvania Railroad will erect a new passenger station at North avenue and Oak street, Baltimore. Wyatt & Nolting of Baltimore are the architects.

The Birmingham & Northwestern Railway has been completed from Jackson to Dyersburg, Tenn., 48 miles, and a special excursion train was run over the line to celebrate the fact.

Reports from Atlanta say that the court has authorized the issue of the \$5,000,000 of receiver's certificates asked for the Atlanta, Birmingham & Atlantic Railroad, of which about \$1,250,000 will be used for betterments and equipment.

According to a dispatch from Denver, James J. Hill has completed arrangements for his roads to operate trains from Seattle to Galveston within two months. About 90 miles of track is to be laid to complete the connection for which work has been in progress for some time.

A dispatch from Valdosta, Ga., says that mortgage has been filed to secure the \$4,000,000 of bonds issued by the Valdosta, Fort Gaines & Western Railroad Co., which, as previously reported, have been sold to a French syndicate. The Standard Trust Co. of New York is mentioned in the transaction.

A report from Parkersburg, W. Va., says that the American Undercurrent Co. is building at Lamberton, in Ritchie county, an electric railway operated by a new method, the current being conveyed to the cars by means of blocks set between the rails. A. W. Barnhart is chief engineer.

J. L. Crider, formerly with the Baltimore & Ohio Railroad Co. and chief engineer of the New York, West Chester & Boston Railroad, has been engaged by J. G. White & Co., Inc., as construction superintendent on the Oakland, Antioch & Eastern Railway, which is an extension of the Oakland & Antioch Railway.

May Establish Florida Plant.

The Beech-Nut Packing Co., Canajoharie, N. Y., writes to the MANUFACTURERS RECORD as follows:

"We are not contemplating the erection of a factory in Florida at present. We are doing some experimental work there this year, which may lead up to our having a plant in Florida at some future time."

Manufacturer Seeking Location.

H. A. Tagatz of the United States Manufacturing Co., Lena, Wis., writes to the MANUFACTURERS RECORD:

"Wanted—A location for an interior house finishing and planing mill plant combined, in connection with a retail lumber business. Would be glad to hear from any towns of 5000 and up who have not home factory like this for special work."

LUMBER

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

GREAT EASTERN LUMBER CO.

Plans of \$1,000,000 Corporation to Develop Timber Land, Build Mills, Construct Railway, Etc.

The Great Eastern Lumber Co., Savannah, has organized with \$1,000,000 capital stock to develop timber land in Georgia and South Carolina. It has purchased 3,000 acres of land fronting three miles on Savannah River, near Savannah, where it will build sawmill, planing mill and electric power plant, besides developing some of the river frontage for industrial sites. The electric plant will use mill waste for fuel and furnish both light and power. The railway will be constructed from Augustine Creek, near the Savannah River, which it will parallel for three miles, to connections with Atlantic Coast Line, Seaboard, Brinson and other railways. Timber from the company's lands will be carried to the mills by rail and water. It will not be rafted, but will be loaded on large barges towed by tugs specially built for this purpose. It is said the timber is of sufficient extent to supply the company's mills for from 15 to 20 years.

This company's officers are as follows: President, George K. Wentworth of Chicago, president of Portland Lumber Co., Lumbermen's National Bank and Coast Range Lumber Co. of Portland, Ore.; vice-president, C. E. Gill of Philadelphia, president of Gill Lumber Co. of that city and Gill-Dawley Lumber Co. of Wausau; secretary, N. J. McCormack of Reinbeck, Iowa, interested in lumber enterprises of that State; treasurer, T. P. Goodbody of Chicago; directors, Charles H. Burras of Chicago and Wm. Farson of New York.

Mr. Gill writes to the MANUFACTURERS RECORD as follows:

"We are now figuring with a number of the largest sawmill builders, and shall contract for the sawmill complete, ready to make sawdust. Our Chicago office, at 608 Hartford Building, will do the buying for the mill. We expect to get started building our railroad immediately, and probably will begin the erection of the mill in about 60 days. The mill will be of frame construction, with two 10-foot bands, horizontal resaw, gang edger on one side, with every known device for economy in manufacturing and handling, drykiln, planing mill and other machinery that we may use in working up our lumber."

Big Plant Begins Manufacturing.

The El Paso (Tex.) Milling Co. has begun operating the first unit of its \$1,000,000 plant, heretofore detailed. Its buildings have a floor space of eight acres, and the plant includes sash and door factory, planing mill, storage warehouse, power plant, office, loading and unloading platform, monorail and steam railway tracks, electric motors, etc. The first unit is for box manufacturing, and is 100x400 feet, with saw-tooth roof 46 feet high, covered with galvanized iron.

To Cut 60,000 Acres.

Conrad & Bond of De Land Fla., will cut 60,000 acres of timber land in Volusia county, having purchased the timber at \$300,000 from the Angier Land & Investment Co. of Tampa, which will utilize the land by agriculture after the timber development is completed.

To Manufacture Pine Flooring.

The Arlington (Ga.) Lumber Co. will erect a two-story 40x100-foot wood build-

ing and install machinery costing about \$10,000 for a daily capacity of 40,000 feet of yellow-pine flooring.

Forest Products Co.

The Forest Products Co. has been organized to manufacture chemicals and charcoal from waste and offal of sawmills and cut-over lands. James D. Lacey is president and William Danner is vice-president. Offices in Whitney-Central Bank Building, New Orleans.

A \$400,000 Company.

The Brown Bros. Lumber Co. of Murchison, N. C., has been incorporated with \$400,000 authorized capital stock by A. G. Wilson of Murchison, D. E. W. F. G. C. and P. L. Brown and S. A. Kinn of Panxutawney, Pa.

MINING

ALABAMA'S COAL OUTPUT.

More Than 15,000,000 Tons Produced in 1911.

The production of coal in Alabama in 1911 was 15,018,965 short tons, with a value of \$19,077,489, according to E. W. Parker of the United States Geological Survey. From the depressed condition of the iron industry in 1911 it was estimated, in a preliminary review published by the Survey in the closing week of 1911, that the coal production of Alabama had decreased about 10 per cent. from the high record of 16,111,462 short tons made in 1910. The quantity of coal made into coke, which is immediately affected by the demands of the iron furnaces, showed, according to the final figures, a decrease of 29 per cent., from 4,417,443 tons in 1910 to 3,129,332 tons in 1911. This decrease was in part made up, however, by an increase of approximately 200,000 tons in the production for other purposes, and the total decrease amounted to only 1,092,497 short tons, or 6.8 per cent. The decrease in value, somewhat less in proportion, was 5.7 per cent., from \$20,236,853 to \$19,077,489. The average price per ton advanced from \$1.26 in 1910 to \$1.27 in 1911.

The coal mines of Alabama in 1911 were practically free from labor troubles, only one instance of disaffection having been reported.

To Develop Tennessee Zinc.

The American Zinc Co., Mascot, Tenn., plans to develop zinc properties now being tested by its subsidiary organization, the Tennessee Exploration Co. of Knoxville, which has 11 drills in the field. The former proposes to build a mill with a daily capacity of 750 tons, driven by 1000 electrical horse-power from a local transmission system. Its concentrates will be shipped to a Hillsboro (Ill.) smelter owned by the American company. The exploration company was incorporated in April with \$200,000 capital stock, and its president is J. D. Upton of Reading, Mass.

To Develop Kentucky Coal.

Report states that J. T. Moore and John Gorman of Hazard, Ky., have purchased and will develop coal land near Hazard, intending to install a \$75,000 plant.

Improvements to Cost \$500,000.

Dispatches from Beaumont state that the Magnolia Petroleum Co. has authorized improvements to cost \$500,000, including enlargements at its Beaumont refinery and building a plant to manufacture (3,000,000 pounds annually) lubricating oils, cup grease, axle grease, etc.

TEXTILES

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

Correspondence relating to textile matters, especially to the cotton-mill interests of the South, and items of news about new mills or enlargements, special contracts for goods, market conditions, etc., are invited by the MANUFACTURERS RECORD. We shall be glad to have such matters at all times, and also to have any general discussion relating to cotton matters.

Carolina Mills' Addition.

The Carolina Mills, Greenville, S. C., will build an additional mill according to plans and specifications by Lockwood, Greene & Co. of Boston, and the building contract has been awarded to the Gallivan Building Co. of Greenville. This new building will be 230 feet long by 105 feet wide, two stories high, with full story basement at one end, of brick and timber slow burning mill construction. It will be equipped for slashers, weaving and clothroom. The company will also make some changes in present mill and equip it with preparatory machinery. It was recently mentioned as to vote on increasing capital stock from \$200,000 to \$400,000, and to double plant. At present the company has 14,000 ring spindles and 406 looms.

The Carolina Mills will add about 12,000 spindles and 350 looms driven by electric power.

The Shawmut Mill.

The West Point (Ga.) Manufacturing Co. will add considerable machinery to its mill at Shawmut, Ala., as stated last month. This new equipment will include 5408 spinning spindles, 36 cards and preparatory machinery from the Howard & Bullough American Machine Co., Pawtucket; warpers and spoolers from the Draper Company, Hopedale; looms from the Lowell Machine Shop, Lowell; electric motors from the Westinghouse Electric Manufacturing Co., Pittsburgh. The West Point management has also bought a 2000-kilowatt Curtis turbine and generator, necessary transformers, etc., for its steam-electric plant at Langdale, Ala., as an auxiliary to present hydro-electric plant.

The Thayer Plant.

The Thayer Manufacturing Co., Charlotte, awarded its building contract to the Fiske-Carter Construction Co. (Worcester, Mass., and Greenville, S. C.), as stated last week. These buildings are to be completed early in 1913. They comprise the following: 153x225-foot spinning mill, two stories high; 163x211-foot weave shed, one story high, with saw-tooth roof; both of standard brick mill construction, using steel beams; 43x47-foot boiler-house. O. A. Robbins of Charlotte is the architect-engineer and treasurer of the Thayer Manufacturing Co. The latter organized with \$500,000 capital stock, as heretofore detailed, and will have 25,000 spindles and 500 looms for manufacturing from combed Egyptian cotton.

Hosiery, Twine, Rugs, Etc.

H. M. Shannon, Richmond, Tex., proposes to install machinery for manufacturing hosiery, twine, toweling, etc., from cotton-gin waste, and an equipment to manufacture rugs from old carpets. He has not as yet purchased the machinery, and is prepared to receive prices.

King Cotton Mill Corporation.

The King Cotton Mill Corporation, Burlington, N. C., has organized with \$50,000 capital stock and purchased

Bellevue Mills, having brick buildings, 2300 spindles, etc. H. D. Eichelberger of Richmond, Va., is president; I. G. King, vice-president; J. M. Browning, secretary, both of Burlington. (This company was recently announced as incorporated at Richmond.)

A \$30,000 Capital Increase.

The Texas Cotton Mill Co., McKinney, Tex., will increase its capital stock from \$100,000 to \$220,000 and plans to increase its capacity. Its equipment now includes 5240 ring spindles, 160 looms, dyeing and finishing machinery, etc.

To Manufacture Cotton Duck.

The Senoia Duck Manufacturing Co., Senoia, Ga., has been incorporated with \$100,000 capital stock by W. A. Robinson, G. N. Robinson and E. P. Robinson. It will continue an established mill.

Textile Notes.

The Ivey Mills Co. of Hickory, N. C., will, it is reported, build another cotton mill.

W. Jess Thompson, Burlington, N. C., will install 20 machines for knitting hosiery and has awarded the contract.

Leroy Springs, president of the Lancaster (S. C.) Cotton Mills, is reported as to add to his company's equipment or build another mill.

C. B. Armstrong, Gastonia, N. C., plans the organization of a company to build a cotton mill equipped with 22 cards, two sets of combers, spindles, looms, etc.

The American Manufacturing Co., St. Louis, will not enlarge its cordage mill, the recent report to that effect being an error. It is building a warehouse to increase its storage facilities.

The Chesnee (S. C.) Mills are now completed. The mill is producing cloth and will in the near future be in full operation. It has 20,160 spindles and 440 looms, steam-driven, producing India lawns made from 1 1/4-inch cotton.

Mississippi Cottonseed Crushers.

At the first annual convention at Jackson this week of the Mississippi Cottonseed Crushers' Association, the program included papers by L. Foot of Canton on what the cotton-oil mill is accomplishing for agriculture; by W. H. Watkins, on the cotton-oil mill as affected by the 10-hour labor law; by M. H. Janin of Vicksburg, on the cottonseed products broker and the oil mill; by State Commissioner of Agriculture H. E. Blakeslee, on the new fertilizer law and cottonseed meal; by State Chemist W. F. Hand, on the advantages of chemical control in the oil mill, and by Edwin Lehman Johnson of Memphis, Tenn., on the prostitution of the cottonseed.

Coosa River Electric Plant.

The Coosa River Electric Power Co., Birmingham, previously organized with \$5,000,000 capital stock, plans to construct a hydro-electric plant at lock No. 2 at Ten Island Shoals, on Coosa River, 18 miles from Gadsden and Anniston and 48 miles from Birmingham. It proposes an initial installation to develop 25,000 horse-power and in future to double this amount, the estimated cost of the plant and transmission line being \$2,000,000. Rowell H. Cobb of Gadsden is president of the company, and is endeavoring to arrange for financing the enterprise.

The first annual report of the Chamber of Commerce of Lagrange, Ga., W. A. Reeves, president and L. C. Busch, secretary, has been published in pamphlet form as an advertisement of that thriving and progressive community.

MECHANICAL

"The Standard" Low Charging Concrete Mixer.

In order to make the name correspond with its firm name as well as with "The Standard" scales and other products of the Standard Scale & Supply Co. of Pitts-



RUNNING MATERIAL TO "STANDARD" MIXER.

burgh, the company has adopted "The Standard" in place of the former name "Eclipse" for its concrete mixer. The perfected form of this batch mixer has been obtained after much experience and many tests for economy and reliability.

In "The Standard" mixer especial attention has been given in its design to the feature of being built low, so that it can be charged directly from barrows, requiring only slightly-inclined runways.

The accompanying illustrations show this feature as well as a general view of the mixer in operation and the use of cart chargers. The low design permits the construction to be exceptionally strong and rigid, maintaining at the same time light weight and portability. The entire mechanism is simple and readily understood, requiring no specially skilled labor in its operation.

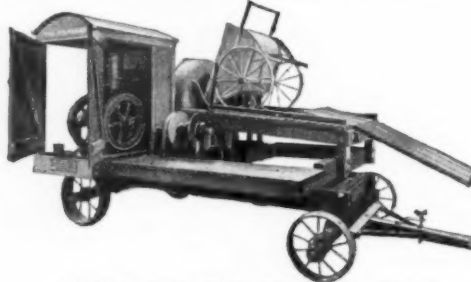
The material to be mixed is wheeled upon a low platform which is portable with the outfit. This material is then charged directly into the end of the drum, from where it is drawn into the center by charging the blades, which are a part of and rotate with the drum. This solves the problem of low charging.

The discharge of the mixer is carried on by mechanism which is the patented invention of the company. It is so designed that it discharges high above the ground, affording ample clearness for barrels or carts, and is rapid in operation. It remains under accurate control, and the

batch may be discharged in wheelbarrow loads or any unit desired. The discharging arrangement is semi-automatic and the discharge door is opened and closed from either end of the drum. The charging platform is attached to the truck, and this, together with the inclined runways, is portable with the machine. For this reason it can be quickly moved by manual

labor or drawn by one or two horses, depending upon the size of the equipment.

The drum is supported by trunnion rollers which tread against the flare of the track bands. It is rotated by a pinion engaging the gear band which encircles the drum. The power is transmitted through a shaft on which the pinion is secured. In the interior of the drum are diagonal mixing blades which are firmly attached to the drum and rotate with it.



DISCHARGING FROM CART INTO MIXER.

Some of these blades are placed in the center and draw the material to the sides, where it is acted upon by other blades placed at an angle at the sides, producing longitudinal or end-to-end mixing, in addition to the pouring action from the rotation of the drum.

It is stated by the company that under average conditions the charging of the drum should be accomplished during three or four revolutions of the drum, making

a batch a minute a very conservative rating; also that it will operate on either a wet or dry mixture without clogging or slopping. The smaller sizes are particularly adapted for sidewalk work on account of their light weight. The top-dressing for sidewalks may be used in the same drum after the concrete has been laid.

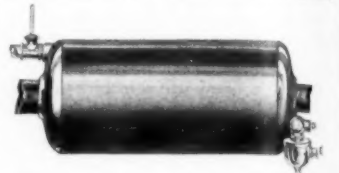
"The Standard" low charging mixer is made in special designs for particular conditions. These various forms, together with "The Standard" scales, steam engines and boilers, gasoline engines, contractors' hoists, wheelbarrows, carts, trucks, etc., manufactured by the company are illustrated and described in Bulletin Y-50. The company's Chicago branch is 1345 Wabash avenue; New York branch, 136 W. Broadway.

American-Jacobson Gas Producer.

A device for producing gas from kerosene, gas engine distillate or gas oil is manufactured by the Jacobson Motor Co., Saratoga Springs, N. Y. It is manufactured in standard sizes, three horse-power and upward, to any size required, for stationary, marine, portable and automobile work. It is claimed to save 50 per cent. to 75 per cent. of fuel cost. The saving obtained by this producer, according to the makers, is because of the difference

and they can be attached easily to any standard engine, either two or four-cycle type. The engine is started on gasoline, and can be run independently of the producer if desired. The device itself is guaranteed to be safe in the hands of ordinary operators; therefore, any man having had experience with gas and gasoline engines will have no difficulty in installing and starting this plant. The makers supply with each plant shipped complete instructions for connecting and starting the producer.

Starting is easy after installing this producer, as the moment the motor gets the first explosion hot air is supplied to the carburetor, so that the atmospheric



AMERICAN-JACOBSON GAS PRODUCER.

temperature changes do not affect starting, as the gas is already formed in the producer and the first explosion warms the engine.

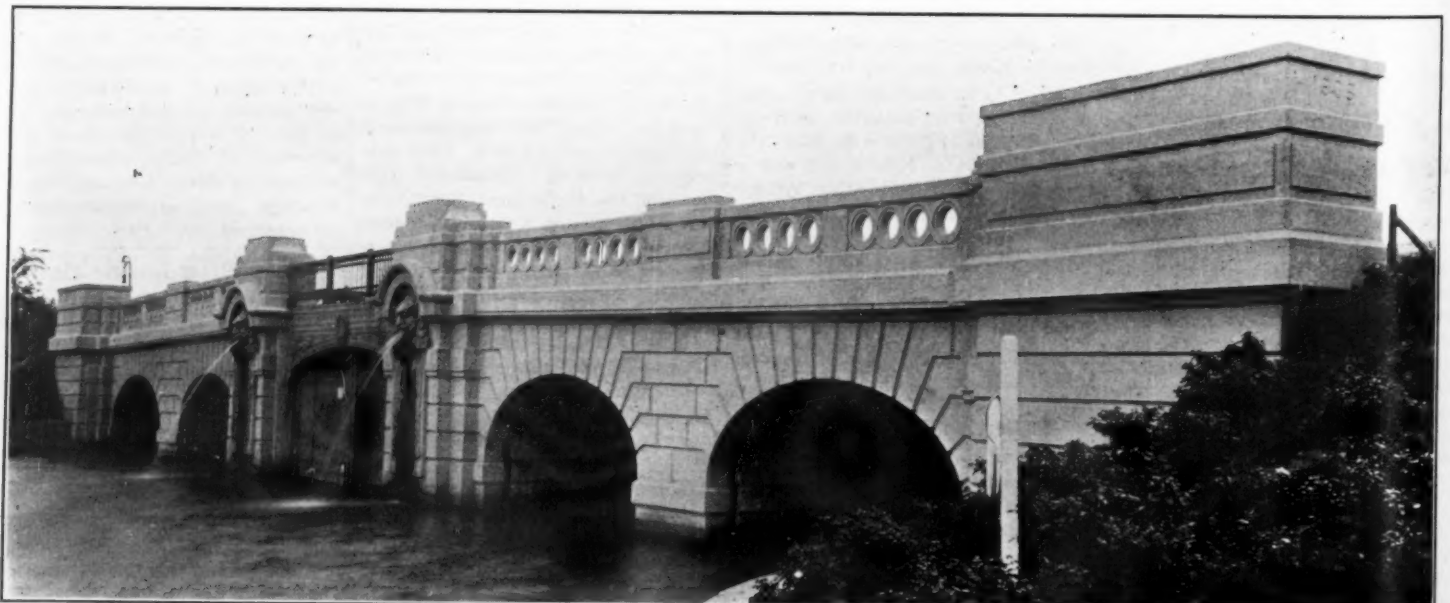
As to the device as a profitable investment, the makers compare a 50-horse-power engine running 10 hours a day, which at the present price for gasoline would cost about \$10. At the average price of kerosene this work could be done for about \$5. If gas oil is used, the saving would still be greater, or about \$7 a day.

All of these producers are guaranteed for one year, as to materials and workmanship, and are sold on 30 days' trial. Prices and further particulars may be obtained by writing to the Jacobson Motor Co., Saratoga Springs, N. Y.

East Tennessee Electric Co.

The East Tennessee Electric Co., Greenville, Tenn., wires the MANUFACTURERS RECORD as follows:

"Proposed plant located on Nolachucky River, nine miles from Greenville; concrete power-house; gravity section dam; power-house designed for four units of 2500 kilowatts each; two units will be installed now; balance as market demands; company's president and chief engineer is W. V. N. Powelson, 60 Wall street, New York, and Greenville, Tenn."



THE TIDAL BASIN OUTLET BRIDGE ACROSS THE POTOMAC RIVER AT WASHINGTON, D. C.

This bridge was constructed under the direction of Lieutenant-Colonel Langfitt, Corps of Engineers, United States Army, and is one of the handsomest pieces of concrete work that has been built in the United States. It is unique in that it is built to act as a dam as well as a bridge, so that it permits the flow from the Potomac River into the Basin at Potomac Park, and automatically holds it there when the tide recedes toward the river. It has been built of cement made in the adjoining State of Virginia, and which takes its name Old Dominion Portland Cement from the State in which it is made.

Construction Department

TO OUR READERS!

In order to follow up properly the Construction Department items, please bear in mind the following statements:

EXPLANATORY

The MANUFACTURERS RECORD seeks to verify the items reported in its Construction Department by full investigation. It is often impossible to do this before the item must be printed or else lose its value as news, and in some items it is found advisable to make statements as "it is reported" or "rumored," and not as positive information. If our readers will note these points they will see the necessity of the discrimination. We are always glad to have our attention called to errors that may occur.

HOW TO ADDRESS

The name of one or more incorporators of a newly incorporated enterprise should always be shown on letter addressed to the official headquarters or to the town of the parties sought, as may be shown in the item. Sometimes a communication merely addressed in the corporate or official name of a newly established company or enterprise cannot be delivered by the postmaster. By following these general directions the postoffice will be enabled to deliver your mail promptly, although it is inevitable that some failure by the postal authorities to deliver mail to new concerns will occur.

WRITE PERSONAL LETTERS

In communicating with individuals and firms reported in these columns a letter written specifically about the matter reported will receive better and quicker attention than a circular. In most instances a return postal card or addressed and stamped envelope should be enclosed with letter.

In correspondence relating to information published in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

The Daily Bulletin of the Manufacturers Record is published every business day in order to give the earliest possible news about new industrial, commercial, building, railroad and financial enterprises organized in the South and Southwest. It is invaluable to manufacturers, contractors, engineers and all others who want to get in touch at the earliest moment with new undertakings, or the enlargement of established enterprises. The subscription price is \$25 per year. On all advertising contracts in the Manufacturers Record for three months or longer a subscription to the Daily Bulletin is included for the contract period.

BRIDGES, CULVERTS, VIADUCTS

Ark., Heber Springs.—Cleburne County Bridge Commissioners awarded contract to Harry Churchill, Pangburn, Ark., at \$24,000 to build three suspension bridges at Winkley Ford, Tumbling Shoals and Miller.

Ky., Paducah.—City, L. A. Washington, City Engineer, will construct proposed reinforced concrete culvert; about 175 cubic yards excavation; 195 cubic yards reinforced concrete; 21,000 pounds reinforcing steel. (See "Road and Street Work." See "Machinery Wanted.")

La., Alexandria.—Rapides Parish Police Jury awarded contract to W. P. Hudson Construction Co. to construct reinforced concrete bridge over Bayou Rapides; cost \$3000.

La., Lake Charles.—Calcasieu parish voted to construct bridge over Calcasieu River between Lake Charles and West Lake; cost \$50,000. Address Police Jury. (Recently mentioned.)

Md., Denton.—Contract recently reported awarded to Chesapeake Construction Co. of Preston, Md., for bridge calls for steel structure 140 feet long, divided into two spans, operating as double draw on central pier and pivot; draws will each be 60 feet long; 24-foot driveway and six-foot sidewalk; estimated cost \$13,000.

Miss., Vicksburg.—Warren county will construct steel bridge over Ball Ground Creek, in Fifth district; J. D. Laughlin, Clerk, receives bids until July 3. (See "Machinery Wanted.")

Mo., Kansas City.—Concrete Foundation Co. of Kansas City has contract at about \$50,000 for concrete work on proposed Broadway viaduct.

N. C., Raleigh.—Seaboard Air Line Railway, W. L. Seddon, chief engineer, Portsmouth, Va., has plans for reinforced concrete bridge over Hillsboro St. (Recently mentioned.)

S. C., Dillon.—Dillon County Commissioners will construct two reinforced concrete bridges across Little Pee Dee River; 85 feet and 45 feet spans, latter being on 45-degree skew; bids received until July 10; R. L. Moody, Clerk; Edwin M. Wayland, Engineer. (See "Machinery Wanted.")

Tenn., Maryville.—Blount county will construct three or four reinforced bridges; Pike Commissioners, T. F. Cooper, chairman, receive bids until July 10. (See "Machinery Wanted.")

Tex., Denison.—Missouri, Kansas & Texas Railway, S. B. Fisher, chief engineer, St. Louis, Mo., will build concrete bridge 80 feet long over Houston Ave., and about six concrete culverts along cut off to be constructed.

Va., Finney.—Russell county will build steel bridge across Clinch River; structure 244 feet 9 inches long; 12-foot roadway; two standard 119-foot and two standard 50-foot spans; cement rubble substructure; bids received 12 noon July 2 at Lebanon, Va.; P. St. J. Wilson, State Highway Commissioner, Richmond, Va. (See "Machinery Wanted.")

W. Va., Grafton.—Grafton, Fairmont & Clarksburg Railroad Co., J. M. Roberts, chief engineer, will construct two to three large bridges over Valley River and five creek bridges.

CANNING AND PACKING PLANTS

Fla., Miami.—Winfield & Elliott Packing Co. organized by T. A. Winfield and H. H. Elliott; leased Cook Bldg. and will equip for handling citrus fruits; proposes during summer to pack limes and avocados; for this has ordered 30,000 boxes.

Ky., Fullerton.—Fullerton Canning Co., capital \$6500, incorporated by M. W. Meadows, J. N. Brickey and G. W. Davis.

N. C., Wilmington.—Mutual Canning Co., capital stock \$50,000 (recently noted organized by Sig. Zulawsky, Box 1011, and others), has not elected officers; will erect \$10,000 mill-construction building; install equipment for vegetable canning and strawberry syrup mixer; dates for letting building and machinery contracts not set.

Tenn., Nashville.—Booth Fisheries Co. will build fish and oyster plant at 320-322 Fourth Ave. North; install cold-storage equipment; cost \$8000 to \$10,000.

Tex., Fort Worth.—Texas Dressed Beef Co. organized to establish packing plant; secured five-acre site; erect four buildings; all mill construction, of concrete and brick; weekly slaughtering capacity, 1000 head cattle; manufacture various commodities from by-products.

CLAYWORKING PLANTS

Ky., Maysville.—Bricks.—Sphar Brick Co. will install machinery to manufacture new line of brick in addition to pressed brick it now manufactures.

Ky., Stanton.—River Brick & Tile Co., capital stock \$10,000, incorporated by H. T. Derrickson, G. W. Conlee and others.

Mo., St. Louis.—Clay Products.—Fox Clay Products Co., capital stock \$5000, incorporated by Bart A. Fox, Thomas C. James and Thomas Fox.

Tex., Plainview.—Bricks.—M. C. Cope, Abilene, Tex., will build pressed-brick plant.

COAL MINES AND COKE OVENS

Ala., Birmingham.—Sibley-Menge Brick & Coal Co. contemplates issuing \$250,000 of bonds; portion for enlarging coal-mining operations.

Ala., Mobile.—Vizard Land & Coal Co., capital stock \$5000, incorporated by William J. Vizard, president, Mobile; Anthony Vizard, vice-president, New Orleans, La.; O. M. Otis, secretary, Mobile; main office in Mobile.

Fla., Orlando.—Orange county will construct steel bridge across St. Johns River, beginning at Celery Ave. in Orange county and crossing into Volusia county. Address County Commissioners.

Ky., Barbourville.—Dean Jellico Coal Co.,

capital \$30,000, incorporated by Robert W. Cole, J. M. Robinson, A. J. Croley and John H. Lawson.

Ky., Hazard.—J. T. Moore and John Gorman have, it is reported, leased coal land, and will install mining plant costing \$75,000, planning ultimate annual output 250,000 tons of coal.

Ky., Middlesboro.—Kentucky-Tennessee Coal Co., capital \$15,000, incorporated by J. S. Asbury, J. L. Manring and J. H. Chesney.

Ky., Owensboro.—Panther Coal Co., capital \$33,000, incorporated by Bartley Skinner, K. Anderson, B. A. Skinner and J. N. Hickman.

Ky., Pikeville.—Elkhorn Consolidated Coal & Coke Co. will construct additional coke ovens.

Ky., South Carrollton.—Evan-Green Coal Co. incorporated by R. B. Eastin, M. A. Summers and S. J. Arnold.

Ky., Whitesburg.—Moss Coal Co., Ray Moss, president, Pineville, Ky., leased 450 acres coal land from Barner Coal Co. of Mt. Sterling, Ky., and will develop; ordered equipment. (Recently mentioned.)

W. Va., Gilmer.—Gilmer Consolidated Coal Co., capital stock \$100,000, incorporated by W. G. Colburn, F. E. Bostic, W. T. Green and others.

CONCRETE AND CEMENT PLANTS

Ala., Moundville.—Ira C. Loveless (recently noted to establish cement brick plant) will erect small building and install concrete machinery. (See "Machinery Wanted.")

Mo., Joplin.—Brick, etc.—J. R. Vincent of Oklahoma City, Okla., is promoting organization of company with \$10,000 capital stock to manufacture brick, tile and blocks from cement.

COTTON COMPRESSES AND GINS

Ga., Montezuma.—City Ginning Co. (H. J. Myrick, J. W. Nelson and J. E. Lightner) will build cotton gin equipped with three 70-saw gins.

Okla., Corum, R. F. D. from Comanche.—Corum Gin Co., capital stock \$5000, incorporated by W. F. Palmer, R. R. Forsythe and M. E. Decker, all of Comanche, Okla.

S. C., Alcot, R. F. D. from Bishopville.—Alcot Ginnery, capital stock \$4000, incorporated by E. H. and J. A. Heaton and L. A. Woodham.

S. C., Lane.—Lanes Ginnery Co., capital stock \$3500, incorporated by B. McCullough, J. Seigler and E. J. Parker.

S. C., Greelyville.—Farmers' Gin Co., capital stock \$3000, incorporated; J. F. Montgomery, president-treasurer; F. Mishal, vice-president; J. E. Rankin, secretary.

Tenn., Jackson.—Merchants' Compress Co., capital stock \$30,000, incorporated by John L. Wisdom, Thomas Polk, O. J. Stovall and others.

Tex., Aransas Pass.—H. F. Underwood, Athens, Tex., will build cotton compress.

Tex., Sabinal.—Farmers' Union Gin Co. organized to build 4-stand oil-burning cotton gin; machinery purchased.

Tex., Waldo.—J. C. Love will build cotton compress recently noted; two-story 36x66-foot sheet-iron main building; install six-gin outfit costing \$7500; daily capacity 60 bales.

Tex., Wheeler.—Wheeler Gin Co., E. E. Holt, president and manager (recently noted incorporated with \$5000 capital stock), will install gin machinery costing \$3000.

COTTONSEED-OIL MILLS

Ala., Florence.—Farmers' Feed, Fertilizer & Gin Co. will double capacity of oil mill during next season.

Ark., Camden.—Camden Oil & Fertilizer Co. increased capital stock from \$25,000 to \$50,000.

Ga., Union Point.—Union Oil & Fertilizer Co., capital stock \$50,000, incorporated by A. J. Gillen of Maxeys, Ga.; Hamilton McWhorter, Jr., of Lexington, Ga.; J. A. McWhorter of Woodville, Ga., and others.

Me., Portland.—Worth Refining Co., capital stock \$1,500,000, incorporated with Clarence E. Eaton as president, T. L. Croteau treasurer.

Tex., Ennis.—Ennis Cotton Oil Co., capital stock \$100,000, incorporated by J. B. Caldwell, A. B. Caldwell, W. F. Templeton and others.

DRAINAGE AND IRRIGATION

Fla., Tallahassee.—Drainage Commissioners State of Florida, J. C. Luning, secretary, receive bids until August 10 to excavate three drainage canals on East Coast of Florida near Pompano, Fulford and Larkin; aggregate length, 16 miles; bottom width, 25 feet; mean depth, 6 feet; excavation, 400,000 cubic yards earth and 200,000 cubic yards rock; J. O. Wright, chief drainage engineer, Tallahassee. (See "Machinery Wanted.")

La., Gueydan.—John G. Neelis, secretary Gueydan Drainage District, states recently noted bond issue of \$172,000 will be applied to reclamation work of subdistrict No. 1, begun February, 1911, and recently completed; this being first reclamation unit of 5600 acres completed by White Lake Land Co. of its 80,000-acre tract; contemplated to reclaim entire tract in units of three miles square, comprising about 5760 acres; each unit to have pumping plant and to be connected with other units and with main canal by locks.

N. C., Elizabeth City.—Board of Commissioners, Camden Run Drainage District, S. W. Gregory, secretary, will construct about 16 miles drainage canals; engineer's estimated cost includes: Clearing 15.7 miles right-of-way, \$300 per mile; excavating 538,132 cubic yards earth at 8 cents; building bridges \$225; total \$46,415.56; work to begin by October 1. (See "Machinery Wanted.")

Tex., Calallen.—C. H. Waterhouse, San Antonio, Tex., will construct irrigation system.

ELECTRIC PLANTS

Ala., Guntersville.—City retained J. B. McCrary Company, Third National Bank Bldg., Atlanta, Ga., to prepare plans for electric-light plant.

Ala., Haleyville.—City, M. S. Drewry, Clerk, will expend \$20,000 on electric-light and water-works construction. (See "Water-works.")

Ala., Montgomery.—L. D. Mathes, general manager of Montgomery Light & Traction Co., writes to Manufacturers Record: "Mr. Tillis, from his personal funds, erected 5000 kilowatt turbine plant and built distribution lines over city; in turning this property over to company, it was necessary to increase capital to reimburse Mr. Tillis; company has filed new mortgage, authorizing \$5,000,000 in bonds; \$1,000,000 now outstanding and the other can be issued only for applying proceeds on new construction; only 80 per cent. of new construction cost can be provided for from proceeds of bond sales; company is giving its property general overhauling, but does not contemplate additional extensions." (This statement further explains recently-reported capital increase.)

Ark., Lake Village.—Lake Village Light & Power Co., capital stock \$7000, incorporated by R. B. Cloggett, M. B. Carson, E. J. Lenz and others.

D. C., Washington.—Washington & Great Falls Railway & Power Co. contemplates building power station and car barn at Great Falls; also proposes to purchase five acres at Great Falls to be converted into amusement park.

Ga., Midville.—City retained J. B. McCrary Company, Third National Bank Bldg., Atlanta, Ga., to prepare plans for proposed electric-light improvements.

Ga., Savannah.—Great Eastern Lumber Co., C. E. Gill, vice-president, will build electric plant. (See "Lumber Manufacturing.")

Ga., Vidalia.—City retained J. B. McCrary Company, Third National Bank Bldg., Atlanta, Ga., to prepare plans for improvements to water-works and lighting systems and construction of sewerage system. (Previously noted.)

Ky., Burkesville.—Baker, Payne & Baker will install 30-horse-power electric plant; cost \$2500; recently noted. (See "Machinery Wanted.")

Ky., Louisville.—Campbell Electric Co., capital \$50,000, incorporated by Herbert L. Harries, T. G. Wilson, Fred A. Nobbe and Isaac Milkewitch.

Ky., Louisville.—Louisville & Interurban Railroad awarded contract to Louisville Bridge & Iron Works to build power-house requiring 1950 tons steel.

Ky., Louisville.—Louisville Lighting Co. will extend electric-light and power system and transmit electricity to Middletown, Anchorage and Jeffersontown; cost \$25,000 to \$30,000.

Ky., Simpsonville.—Lincoln Industrial Institute, A. E. Thompson, president, contemplates constructing electric-light and power plant; cost \$10,500.

Md., Hagerstown.—Hagerstown Light & Heat Co. wires Manufacturers Record: "Applied to Public Service Commission for authorized bond issue \$1,500,000; amount to be issued, \$350,000 for improvements to embrace part of new plant, larger distribution system and take care of future service of growing city."

Mo., Stewartville.—J. B. Reesman, Mayville, Mo., applied for franchise to construct electric-light system.

Mo., Warrensburg.—State Normal School will construct electric-light system; Worley & Black, consulting engineers, Kansas City, Mo., are preparing plans.

N. C., Hendersonville.—Laurel Park Street Railway is interested in erection of power plant to cost \$20,000.

Okl., Ponca.—City awarded contract to Tonkawa Construction Co., Tonkawa, Okla., for construction of proposed electric-light plant costing \$30,000; Burns & McDonnell, engineers, Kansas City, Mo.

Okl., Skiatook.—City voted \$3000 bond issue to construct electric-light system. Address The Mayor.

S. C., Clinton.—City retained J. B. McCrary Company, Third National Bank Bldg., Atlanta, Ga., to install proposed power plant at cost of \$18,000; engines, boilers and generators purchased; other machinery to be bought at later date.

S. C., Greers.—City retained J. B. McCrary Company, Third National Bank Bldg., Atlanta, Ga., to prepare plans for proposed electric-light improvements.

Tenn., Halls.—James Z. George of Memphis, Tenn., purchased plant of Halls Light, Water & Ice Co., and will improve; install dynamo and increase capacity of ice plant; laying water mains in business district.

Tenn., Knoxville.—Knoxville Railway & Light Co. has permit to erect proposed power-house at Sixth Ave. and Southern Railway; brick, steel and concrete; two stories; cost \$15,000; L. C. Powers has contract.

Tex., Coleman.—City contemplates constructing electric-light plant. Address The Mayor.

FERTILIZER FACTORIES

Ark., Camden.—Camden Oil & Fertilizer Co. increased capital stock from \$25,000 to \$50,000.

Fla., Bartow.—J. R. Davis, C. L. Wilson and J. C. Thomson are promoting organization of company to build fertilizer plant.

Ga., Union Point.—Union Oil & Fertilizer Co., capital stock \$50,000, incorporated by A. J. Gillen of Maxeys, Ga., and others. (See "Cottonseed-Oil Mills.")

FLOUR, FEED AND MEAL MILLS

Ky., Frankfort.—Frankfort Roller Mills will erect 25-barrel flour mill.

La., New Orleans.—Sears Feed Milling Co. organized by George E. Sears, Adolph D'Aquila, John Marks and others.

Miss., Clarksdale.—Planters' Manufacturing Co. incorporated with authorized capital stock of \$1,000,000 by W. P. Holland, C. W. Leeton, E. J. Mullens, C. W. King and others; contemplates manufacturing alfalfa flour, growing and manufacturing sisal hemp, etc.

Miss., West Point.—Alfalfa Milling Co. will erect two buildings; 50x100 feet each; corrugated iron; cost \$5000; bids opened June 25; J. W. Martin, engineer in charge; machinery includes alfalfa and corn mills and mixing machines; cost \$6000; daily capacity, 40 tons alfalfa meal, 60 tons mixed feed and 800 sacks chops; E. P. Neel, president, Memphis, Tenn.; T. J. Mitchell, secretary-treasurer, West Point. (Recently noted incorporated with \$30,000 capital stock.)

N. C., Durham.—Austin-Heaton Company will repair present wheat rollers and install additional machinery, increasing daily capacity of plant from 300 barrels to 350 barrels.

S. C., Florence.—C. T. O'Farrell, Dillon, S. C., is organizing company to establish grist mill.

Tenn., Limestone, R. No. 2.—Braylesville Mills, J. H. Taylor, manager (recently noted contemplating additional machinery), will

install corn and cob crusher, corn sheller, cockle machine, scroll mill, etc.

Tenn., Wartrace.—Garrison Valley Mills, Robert Thomas, manager, is name of company recently noted incorporated (under Tenn., Shelbyville) with \$30,000 capital stock by W. J. McGill of Shelbyville and others; will operate mill at Wartrace; officers not elected.

Tex., Houston.—Standard Milling Co. increased capital stock from \$300,000 to \$400,000.

FOUNDRY AND MACHINE PLANTS

Ala., Bessemer.—Iron Pipe—L. R. Lemolne, president of United States Cast Iron Pipe & Foundry Co., 1421 Chestnut St., Philadelphia, Pa., general offices at 71 Broadway, New York, writes to Manufacturers Record: "So far as our plans for the Bessemer works are concerned, any notice is premature." (This statement prompted by rumors company will expend \$250,000 for improvements at central Bessemer plant.)

Ala., Selma.—Motors.—R. E. Springle of Selma, Dr. Winston S. Jones and G. T. Dannelly of Camden, Ala., will establish plant to manufacture patented gravity motor for operating light machinery.

Ark., Okolona.—Neimeyer Milling Co. will build blacksmith shop. (See "Lumber Manufacturing.")

Fla., Brooksville.—Motors.—King Valveless Motor Co. organized with \$6000 capital stock to manufacture stationary and marine engine invented by W. A. King.

Fla., Tampa.—Motors.—C. D. Burrows of Beverly, Mass., will establish plant to manufacture motors to operate grubbing machines and automobiles.

Ky., Covington.—Locomotives.—Cincinnati Locomotive & Car Works, Cincinnati, O., will establish plant; incorporated with \$25,000 capital stock by William B. Edwards, John S. Glenn and Daniel Goldstein, all of Cincinnati.

Md., Baltimore.—Machine Shops.—Consolidated Gas, Electric Light & Power Co., Lexington and Liberty Sts., will build brass-finish shop at Wicomco and Carey Sts.; 115x115 feet; one story; brick and concrete; also erect machine shop at Carey and Severn Sts.; brick and concrete; one story; 23x75 feet.

Mo., Cartersville.—Hardware and Mining Supplies.—Southwest Supply Co. will build shops to manufacture hardware and mining supplies.

Okl., Bartlesville.—Machinery.—Little Giant Pulling Machine Co., capital stock \$5000, incorporated by John C. Cobligh, H. A. Beaseley and W. R. Meyers.

Tex., Houston.—Electrotype.—Hilton E. Dunseth, Spokane, Wash., will, it is reported, build electrotype foundry.

Va., Norfolk.—Steel Work.—Virginia Steel Corporation increased capital stock from \$50,000 to \$150,000.

GAS AND OIL DEVELOPMENTS

Ark., Swain.—Newton County Oil, Gas & Mineral Co., D. L. Cooley, president (recently noted incorporated with \$110,000 capital stock), will develop oil wells; lay 4½-inch to 16-inch piping. (See "Machinery Wanted.")

Ky., Louisville.—Richland Oil Co., capital stock \$60,000, incorporated by F. W. McKee, F. J. Fulton and T. K. Helm.

La., Shreveport.—Cross Lake Oil & Gas Co., capital stock \$20,000, organized by F. A. Leonard, J. P. Flournoy and others; will develop 100 acres on Cross Lake.

La., Shreveport.—Cedar Grove Oil & Gas Co., capital stock \$100,000, incorporated; J. W. Atkins, president; George B. Wheelock, vice-president; B. R. Jones, secretary-treasurer.

Oklahoma.—Big Horizon Oil & Gas Co., capital stock \$250,000, incorporated by John F. Dibble, Edward B. Duffy, Philip Reisman, Edward E. Arrowsmith and George F. Wolf, all of Pittsburg, Pa.

Okl., Frederick.—Frederick Oil Producing Co., capital stock \$25,000, incorporated by William Ray, J. M. Smith and L. H. Potts.

Okl., Checotah.—City voted to grant franchise to Checotah Gas & Power Co. to pipe natural gas into city from Morris field; contract calls for six miles of piping within city; W. T. Amls of Muskogee, Okla., is interested.

Tex., Amarillo.—Amarillo Oil & Gas Co., capital stock \$50,000, incorporated by S. J. Itale, Frank Woflin, G. W. McMillen and others.

Tex., Childress.—G. R. Cooper Oil Development Co., capital stock \$7000, incorporated by G. R. Cooper, J. M. Crews and S. P. Buster.

Tex., Electric.—Guaranty Oil Co., capital stock \$25,000, incorporated by T. M. Lockett, W. J. Sheldon and A. H. Sheldon.

Tex., Gilmer.—Texas Oil, Gas & Coal Co. incorporated by B. D. Futrell, H. P. McGaughy and John A. Mathis.

Tex., Mexia.—Mexia Oil & Gas Co., capital stock \$30,000, incorporated; leased 12,000 acres land and awarded contract for 10 test wells, each 1500 feet deep.

Tex., Waxahachie.—Sheldon Oil Co., capital stock \$25,000, incorporated; W. J. Sheldon, president and manager; W. S. Hazard, first vice-president; P. Q. Rockett, second vice-president; Lem Wray, secretary; A. H. Sheldon, treasurer.

W. Va., Charleston.—Frederberger Oil Co., capital stock \$3000, incorporated by George W. McClintic, Samuel B. Avis, M. F. Matheny and others.

W. Va., Charleston.—Amber Oil Co., capital stock \$25,000, incorporated by Ira G. Sayre, C. J. Bumpus, F. R. Hurlbutt and others.

W. Va., Huntington.—Winifrede Oil & Gas Co., capital stock \$10,000, incorporated by R. P. Aleshire, J. H. LeBlanc, A. J. Spears and others.

ICE AND COLD-STORAGE PLANTS

Fla., Lakeland.—Lakeland Ice & Refrigerating Co. will build ice plant; brick; 1½ stories; 75x175 feet; purchased additional 50-ton ice machine, providing capacity of 75 tons ice every 24 hours; plans for building include shed 350 feet long, which will enable 10 refrigerator cars to be iced at one time; cost \$50,000.

Fla., Tampa.—Consumers' Ice Co. has plans by Bonfoey & Elliott, Tampa, for cold-storage plant; 91x105x80 feet; fireproof construction; electric lighting; cost \$50,000; date of opening bids not set; architects may be addressed. (Recently noted.)

Md., Brunswick.—Hygeia Ice Co., Geo. Wm. Smith, president, Frederick, Md. (recently noted purchasing site for plant), advises building plans are not decided; capacity to be 25 tons (distilled water) ice daily. (See "Machinery Wanted.")

N. C., Lexington.—T. S. Eames of Lexington and T. H. Hines of Salisbury, N. C., will install 10-ton ice plant; building secured.

N. C., Wilmington.—Wilmington Ice & Storage Co. purchased three-story building on site 31x65 feet and will remodel as ice and cold-storage plant; first floor for cold-storage will have concrete floor insulated with four inches of cork; seven or eight cold-storage rooms; second and third floors equipped as plant with daily capacity 10 to 12 tons ice; plans for remodeling building prepared and contractors invited to submit bids; Ed Taylor is president and C. W. Nixon secretary-treasurer. (Recently mentioned.)

Tenn., Halls.—James Z. George of Memphis, Tenn., purchased plant of Halls Light, Water & Ice Co.; will increase capacity of ice plant. (See "Electric Plants.")

IRON AND STEEL PLANTS

Okl., Sapulpa.—B. M. Van Ormon, secretary, advises Manufacturers Record that Sapulpa Commercial Club is considering proposals of companies to establish 80-ton steel mill and two smelters.

W. Va., Wheeling.—Iron Furnaces, etc.—La Belle Iron Works stockholders authorized increase of capital stock from \$10,000,000 to \$20,000,000; company writes Manufacturers Record: "No action has been taken by directors; neither have certain improvements, now under consideration, been passed upon; as soon as decided will be glad to give you details."

LAND DEVELOPMENTS

Ala., Marbury.—Marbury Lumber Co., D. H. Marbury, president, will develop 50,000 acres cut-over land for fruit growing and agriculture; establish demonstration farms and orchards and later colonize tract.

Ala., Greens (Postoffice at Birmingham).—Bellgreen Farm, capital stock \$5000, incorporated; Robert N. Bell, president; Fred Shields, secretary.

D. C., Washington.—Washington & Great Falls Railway & Power Co. contemplates purchase of five acres at Great Falls to be converted into amusement park. (See "Electric Plants.")

Fla., Jacksonville.—Womanada Land Association, capital stock \$300,000, organized to develop 18,000 acres of land in Duval and Nassau counties, about 10 miles from Jacksonville, proposes to divide property into sec-

tions of 640 acres, each subdivided into 16-acre tracts; improvements to include town site Womanada, experimental farm, electric light plant and 10 cottages; entire development known as Jacksonville Pines; James A. Mandeville is secretary-treasurer.

Fla., Lakeland.—Georgia-Florida Land Co. (J. W. Melton and others) purchased 12-acre orange grove and will develop as residential suburb; divide into building lots, construct streets and sidewalks, etc.

Fla., Pittman.—Florida Home Development Co., Jessup, Md., has tract of land on Lake D'Or; will develop for growing grapefruit and for winter residential section; W. A. Fennell is secretary. (Recently noted incorporated with \$120,000 capital stock.)

Md., Baltimore.—Philip C. Mueller Building Co., capital stock \$10,000, incorporated by Philip C. Mueller (1931 E. Baltimore St.), John Leo Mueller, Louis A. Mueller, George A. Mueller and George Matthew Mueller; continues business established five years; buys land and erects buildings for sale.

Miss., Egypt.—Egypt Plantation Co., capital stock \$1,000,000, incorporated by G. L. Hawkins of Hattiesburg, Miss.; J. S. Watson and J. R. Watson of Lexington, Miss.; wires Manufacturers Record: "Acreage 5,000; three miles front on Yazoo River; 3,000 acres in cultivation; estimated cost, \$50,000 for tilling and other improvements; all farm land."

N. C., Charlotte.—Haywood Orchard Co., capital stock \$50,000, incorporated by J. W. Zimmerman, R. L. Gitton, E. P. Purcell and W. J. Chambers; officers not yet elected; will develop 155-acre apple farm on Southern Railway, Haywood county.

N. C., Charlotte.—Fabrik Development Co. purchased 60 acres land for about \$55,000 and will undertake development; divide into manufacturing sites for lease or sale; was recently reported incorporated (under "Textile Mills") with \$50,000 capital stock by W. S. Lee, Thomas Gresham and A. C. Springs.

S. C., Charleston.—Rabbit Point Plantation Co. incorporated; W. G. Harvey, president; R. C. Selly, vice-president; J. E. Harvey, secretary-treasurer.

Va., Lawrenceville.—Alberta Land & Improvement Co., capital stock \$25,000, incorporated; R. W. Bragg, president, Lawrenceville; James E. Stamford, vice-president, New York; W. A. Stamford, secretary-treasurer, Alberta, Va.

Va., Quicksburg.—Neff Orchards, Tom I. Zirkle, president, will develop 52 acres; orchards and buildings; cost about \$22,500. (Previously noted incorporated with \$25,000 capital stock.)

Va., Newport News.—Hampton Roads Corporation will organize with \$2,000,000 capital stock and \$2,000,000 debenture bonds; holding corporation of Old Dominion Land Co. (under option to G. A. Northcott (president of new corporation) and Guy W. Mallon of Cincinnati, O.; directors will include Messrs. Northcott and Mallon, Arthur L. Adamson of Richmond, Va.; E. E. Abbott of Huntington, W. Va., and others; properties include 24,650 building sites, 100 acres for factory sites, 6000 acres farm and timber land, sewer system, water-works, etc.

LUMBER MANUFACTURING

Ala., Birmingham.—Whitesell Lumber Co., capital stock \$3000, incorporated; J. M. Adams, president, Birmingham; G. P. Whitesell, vice-president and general manager, Maplesville, Ala.; John N. Gunnels, secretary-treasurer, Birmingham.

Ala., Manchester.—Manchester Lumber Co. will rebuild burned sawmill; single land and gang; machinery contract awarded.

Ala., Monroe County.—R. B. Ray of Mobile, Ala., secured sawmill privileges on 16,000-acre tract in Monroe county. (See "Miscellaneous Factory.")

Ark., Fordyce.—R. D. Wilkins purchased 609 acres timber land for \$10,500 and will build sawmill.

Ark., Okolona.—Neimeyer Milling Co. will build sawmill to have daily capacity of 50,000 feet; also erect blacksmith shop and hotel.

Ark., White Hall.—James A. Craine of Harrisburg, Ill., purchased 1000 acres timber land and will develop; is erecting mills; will cultivate land after timber is cut.

Fla., Chipley.—Henderson-Walt Lumber Co., Sanford, Ala., purchased plant and about 25,000 acres timber land in Washington and Holmes counties (recently mentioned) from George E. Wood Lumber Co. of Careyville, Fla., for about \$400,000; will

install additional machinery, increasing capacity to 125,000 superficial feet per day.

Fla., Davenport.—J. E. Bowren will build sawmill of 15,000-foot capacity; also install dry kilns and planers.

Fla., De Land.—Conrad & Bond purchased standing timber (reported price about \$300,000) on 60,000 acres of Volusia county timber land owned by Angier Land & Investment Co. of Tampa, Fla.

Fla., Micanopy.—Melton Lumber Co. will rebuild saw mills recently burned.

Ga., Arlington.—Arlington Lumber Co., J. G. Cowart, president, will rebuild plant recently noted burned; erect two-story 40x100-foot wood structure; plans and construction by company; install sawmill machinery costing about \$10,000; date of opening machinery bids not set; daily capacity 40,000 feet yellow-pine flooring.

Ga., Savannah.—Great Eastern Lumber Co. organized with \$1,000,000 capital stock; has extensive timber lands in Georgia and South Carolina; near Savannah will erect plant with daily capacity 150,000 feet lumber, using both soft and hard wood; mill to have electric motors, etc.; will construct electric plant (mill refuse for fuel) for light and power; 240 acres for site near Savannah; also construct railway to timber and connect with trunk lines; operate railway as subsidiary; ship timber to mills by rail and water, for latter using barges towed by specially built tugs; land near Savannah will also be developed for industrial sites, fronting three miles on Savannah River; officers as follows: President, George K. Wentworth of Chicago, president of Portland Lumber Co. and other corporations of Portland, Ore.; vice-president, C. E. Gill, president of Gill Lumber Co., Philadelphia, Pa.; and other corporations; secretary, N. J. McCormack, lumber manufacturer, etc., Reinbeck, Iowa; treasurer, T. P. Goodbody, financier, Chicago, Ill. Mr. Gill has offices at 1119 Land Title Bldg., Philadelphia, and writes to Manufacturers Record: "Now figuring with number of largest sawmill builders and shall contract for sawmill complete; our Chicago office (608 Hartford Bldg.) will do the buying; expect to get started building railroad immediately and probably begin erection of mill in about 60 days; mill of frame construction with two 10-foot bands, horizontal resaw, gang edger on one side, with every known device for economy in manufacturing and handling, drykiln and planing-mill and other machinery."

La., Lake Charles.—Lyons Lumber Co. purchased timber land for \$6000.

La., Winnfield.—Wood-Drewett Lumber Co., Ltd., capital stock \$100,000, incorporated; J. T. Wood, president; John H. Matthews, vice-president; J. E. Drewett, secretary; Mrs. M. I. Wood, treasurer.

Miss., Laurel.—Laurel Lumber Co., capital stock \$50,000, incorporated by F. K. Bradshaw and Arthur Corry.

N. C., Murchison.—Brown Bros. Lumber Co., capital stock \$400,000, incorporated by A. G. Wilson of Murchison; D. F., W. F., G. C. and P. L. Brown and S. A. Kinn of Punksawney, Pa.

S. C., Furman.—Furman Lumber Co., capital stock \$25,000, incorporated by W. C. Patrick, J. F. Stone and C. W. Cummings.

METAL-WORKING PLANTS

Ga., Brunswick.—Turpentine Cups, etc.—Kenner Cup & Gutter Co. incorporated by W. E. Kenner, D. L. Keller, Albert Fendig and E. H. Mason to manufacture turpentine cups, gutters, implements, etc.

Tenn., Chattanooga.—Hardware.—J. M. Hecht Brass Works, Chicago, Ill., contemplates establishing plant to manufacture light shelf hardware of brass, bronze and aluminum.

Tenn., Chattanooga.—Corrugating.—Wheeling Corrugating Co. of Chattanooga and of Wheeling, W. Va., awarded contract to Moody & Co., Chattanooga, to erect building; 50,000 square feet; plans by Beardon & Deacon, Chattanooga. (Recently noted under "W. Va., Wheeling.")

MINING

Mo., Fairview.—Lead and Zinc.—West Twenty Lead & Zinc Co. will rebuild 200-ton concentrating plant recently reported burned; A. F. Rider is manager of mines.

Mo., Webb City.—Lead and Zinc.—Hattie G. Mining Co. organized; leased 10 acres and will build mill.

Okla., Tulsa.—Stone.—Bromide Oolitic Stone Co., capital stock \$100,000, incorporated by Robert and M. E. Galbreath of Tulsa and J. D. Kivlehen of Edmond, Okla.

Tenn., Knoxville.—Marble.—Cedar Bluff Marble Co., capital stock \$40,000, incorporated by T. L. Peters, S. A. Rogers, M. D. Keener and others.

Tenn., Lenoir City.—Marble.—Conservation Marble Co., recently noted incorporated (under Tenn., Loudon) with \$48,000 capital stock by A. C. Nickerson (president Nickerson Manufacturing Co., Knoxville, Tenn.) and others, contemplates installation of complete electrical quarrying equipment.

Tenn., Mascot.—Zinc.—American Zinc Co. plans to develop zinc properties now being tested (11 drills in field) by its subsidiary organization, Tennessee Exploration Co., Bank & Trust Bldg., Knoxville, Tenn.; proposes to build mill with daily capacity 750 tons, driven by 1000 electrical horse-power from local transmission system. (Tennessee company reported incorporated in April with \$200,000 capital stock, etc.)

Tex., Beaumont.—Rock Asphalt.—Uvalde Rock Asphalt Co. will develop rock asphalt deposits, aggregating 750,000 tons, on 18,000 acres land in Uvalde county; owns about \$75,000 worth of machinery, buildings, six miles railroad right of way, etc.; Blevett Smyth, president; T. S. Reed and Joe E. Carroll, vice-presidents; C. E. Walden, secretary, and Frank Alvey, treasurer. (Recently reported incorporated with \$150,000 capital stock.)

Tex., Wortham.—Wortham Mining Co., capital stock \$150,000, incorporated by T. A. Bounds, J. M. Bounds, J. J. Stubbs and others.

Va., Pendleton.—Pyrites.—Townsend & Hand will develop pyrites mines recently

soleum at Forest Hill Cemetery; concrete, stone and marble; 100x60 feet; cost \$125,000.

Tex., Dallas.—Dallas Hotel Co. petitioned for franchise to construct tunnel under Akard and Main Sts. to proposed \$600,000 store and office building (recently described) at Main and Akard Sts.; also tunnel under Commerce St. to connect Adolphus Hotel with Oriental Hotel, and another tunnel under Commerce St. to Fulton Market building recently reported to be erected near Field and Commerce Sts.

Tex., Houston.—Channel.—Government awarded contract to Atlantic, Gulf & Pacific Co. of New York at \$2,365,791 to construct Houston ship channel from deep water in Galveston harbor through Galveston Bay, San Jacinto Bay, San Jacinto River and Buffalo Bayou to head of Long Reach near Harrisburg; distance 51 miles; \$2,500,000 available; Maj. Earl I. Brown, U. S. Engineer, Galveston, Tex. (Full particulars recently noted.)

Tex., Mart.—Steel Reservoir.—International & Great Northern Railway Co., O. H. Crittenden, chief engineer, 1415 Carter Bldg., Houston, Tex., will construct steel crude-oil reservoir; capacity, 10,000 barrels. See Tex., Taylor. (See "Machinery Wanted.")

Tex., San Marcos.—Steel Reservoir.—International & Great Northern Railway Co., O. H. Crittenden, chief engineer, 1415 Carter Bldg., Houston, Tex., will construct two steel crude-oil reservoirs; capacity, 10,000 and 500 barrels. See Tex., Taylor. (See "Machinery Wanted.")

Tex., Taylor.—Steel Reservoirs.—International & Great Northern Railway Co., O. H.

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noted (under Va., Mineral); 100 acres; machinery bids to be noted later.

Va., Richmond.—Gold.—Catawba Gold Mine Corporation, capital stock \$50,000, incorporated; B. Davie, president; S. W. Travers, vice-president; T. M. R. Talcott, secretary-treasurer.

MISCELLANEOUS CONSTRUCTION

Ala., Mobile.—Wharves.—Alabama Port Land & Improvement Co., capital stock \$1,500,000, incorporated to build wharves and other terminal facilities; has 5000 acres; president, John W. Upp; vice-president, Edw. M. Hewlett; both of Schenectady, N. Y.; treasurer, Charles E. Barry; company is subsidiary to Alabama Port Terminal Co., promoting electrical railway between Alabama Port and Mobile; will undertake terminal improvements heretofore proposed.

Fla., Miami.—Docks, etc.—City votes August 27 on \$60,000 bond issue to acquire docks and parks and build docks and improvements. Address The Mayor.

Fla., Pensacola.—Wharves, etc.—Gulf Refining Co. (Pittsburgh, Pa., and Port Arthur, Tex.) contemplates building wharves. (See "Miscellaneous Factories.")

Ga., Augusta.—Levee.—Special correspondent wires Manufacturers Record: "A \$1,250,000 bond issue carried: \$1,000,000 for Savannah River Levee; water-works extensions, \$100,000; \$150,000 for hospital." Nisbett Wingfield, Commissioner of Public Works. (Recently noted.)

Tenn., Memphis.—Mausoleum.—Charles Pfeil, architect, Memphis, prepared plans for mau-

Crittenden, chief engineer, 1415 Carter Bldg., Houston, Tex., will construct four steel crude-oil reservoirs; one each at Taylor and Mart, Tex., and two at San Marcos; capacity, 15,000, 10,000, 10,000 and 500 barrels, respectively; bids invited. (See "Machinery Wanted.")

Va., Newport News.—Coal Pier.—Chesapeake & Ohio directors approved plans for coal pier recently announced; M. J. Caples, fourth vice-president, Richmond, Va., wires Manufacturers Record: "Pier will have 1200 feet of berth room on each side; 90 feet high; dumping capacity of over 3000 tons per hour; built of steel on concrete foundations; cars raised to top of pier by two elevators separately operated; two dumping machines similar to those used in unloading coal into vessels on the Great Lakes; estimated cost of pier, \$1,500,000; expect to have complete in 18 months."

MISCELLANEOUS ENTERPRISES

Fla., Miami.—Garbage Incinerator.—City votes August 27 on \$5000 bond issue to build incinerators and devices for disposal of garbage. Address The Mayor.

Ga., Atlanta.—Heating, etc.—Eichberg Heating Co., capital stock \$5000, incorporated by John L. W. Roy and E. F. Eichberg; heating and ventilating installation.

Ky., Louisville.—Blueprints.—Electric Blueprint Co. incorporated by W. E. and P. H. Currier, S. B. Tinsley and H. A. Churchill.

La., Shreveport.—Oil Storage Plant.—Water-Pierce Oil Co. (main office St. Louis,

Mo.) purchased site for \$18,000 on which to build oil storage plant.

Miss., Biloxi.—Shipyard.—Martain, Fountain & Son purchased site and several buildings on Back Bay; will establish shipyard.

Mo., Columbia.—Construction.—Feltz-Simon Construction Co., capital stock \$800, incorporated by Guy T. Feltz, B. D. Simon and B. E. Hatton.

Mo., St. Louis.—Construction.—Steininger-Taylor Construction Co., capital stock \$20,000, incorporated by Edward A. Steininger, Ralph P. Taylor and Arthur N. Sager.

S. C., Abbeville.—Press & Banner Co., capital stock \$10,000, incorporated by W. W. Bradley, W. R. Bradley and W. T. Walker.

S. C., Columbia.—Express.—Jenkins Express Co., capital stock \$5000, incorporated by E. A. Jenkins, C. G. Guignard and G. A. Guignard.

S. C., Columbia.—Abattoir.—John McNeal, City Engineer, states city (recently noted to open bids June 12) has not yet awarded contract for proposed abattoir buildings; machinery contract was let to Brecht Company, St. Louis, Mo. (not Cincinnati, O., as previously stated.)

S. C., Glenn Springs.—Drayage.—Glenn Springs Automobile Co. incorporated; C. F. Smith, president; Paul Simpson, secretary-treasurer.

Tenn., Lewisburg.—Laundry.—J. C. Stacy, Shelbyville, Tenn., will establish laundry; machinery purchased.

Tex., Dallas.—Printing.—John F. Worley Printing Co. purchased site 58x109x119 feet on which to erect building to be equipped as printing plant; building to be erected in about 10 months; no plans considered as yet.

Va., Norfolk.—Laundry.—Model Laundry Co., capital stock \$10,000, incorporated; L. W. Walker, president, Norfolk; J. Z. Lowe, vice-president, Portsmouth, Va.; W. H. Lowe, secretary-treasurer, Norfolk.

Va., Salem.—Mineral Water.—Acid Iron Mineral Co. will erect building; brick; 50x70 feet; one story; at present located in Comas Cigarette Machine Co.'s building.

MISCELLANEOUS FACTORIES

Ala., Leeds.—Powder.—Bowren & Johnson purchased site on which to build powder plant; unit system of construction; Theodore Lee of Leeds is contractor.

Ala., Mobile.—Pine Wood Products.—Mobile Wood Turpentine Co., J. A. Schofield, president, will manufacture pine wood products; 50 cords daily capacity; address, Mobile, Three-Mile Creek. (Mr. Schofield recently noted as installing machinery.)

Ala., Monroe County.—Turpentine.—McFall Turpentine Co. (organized by R. D. McFall of Bay Minette, Ala.; R. S. McFall, O. M. Gordon and B. D. Gordon of Brewton, Ala.) acquired turpentine privileges on 16,000 acres land in Monroe county, estimated to cut or cup about 65 crops; R. B. Ray of Mobile, Ala., secured sawmill privileges on tract.

D. C., Washington.—Pulleys.—Winner Pulley Manufacturing Co. incorporated with \$50,000 capital stock by Isador Small (713 7th St.), Max Janof and Louis Cohen.

Fla., Pensacola.—Oil Refinery.—Gulf Refining Co. (Pittsburgh, Pa., and Port Arthur, Tex.) purchased tract on water front near Main and A Sts.; proposes to erect oil tanks, wharves, warehouses, etc.

Fla., St. Petersburg.—Gas.—City is asking bids on gas franchise; bids received until 7.30 P. M. July 3; W. F. Divine, City Clerk. (See "Machinery Wanted.")

Fla., Tampa.—Cigars.—Briskol Cigar Co., capital stock \$50,000, incorporated by George Briskol, Andrew Briskol and Paul F. Seclor of Tampa and Charles R. G. Schimpf of Mobile, Ala.

Ga., Augusta.—Medicine.—Augusta Medicine Co., capital stock \$100,000, incorporated by J. T. Moseley, R. L. Miller and F. T. Poynter.

Ga., Cordele.—Gas.—City granted franchise to J. B. McCrary Company, Atlanta, Ga., to construct gas system; W. H. Dorris, Mayor. (Recently mentioned.)

Ky., Louisville.—Medical Compounds.—Liversal Co., capital \$10,000, incorporated by George C. Heis, George Cary Tabb and M. E. Clines.

Ky., Paducah.—Chemicals.—Hill Chemical Co., capital \$60,000, incorporated by George W. Hill, George L. Hill and Robert H. Scott.

La., Estherwood.—Lime, Chicken Feed, etc. Estherwood Boat Club organized with \$3000 capital stock; conduct pleasure-boat business and manufacture grits (chicken feed) and lime from shells; also prepare shell for cement work and paving; erect shell mill; James A. Leighton, president; W. P.

Reed, vice-president; Allen Hoffpauir, secretary-treasurer.

La., New Orleans—Drugs.—Finlay Dicks Company has plans by Favrot & Livaudais, New Orleans, for remodeling building; 53x 160 feet; mill construction. (Recently noted.)

La., New Orleans—Wood Products.—The Forest Products Co. organized with James D. Lacey president and William Danner vice-president; manufacture chemicals and charcoal from waste of sawmills and cut-over lands; offices, Whitney-Central Bank Bldg.

La., Westwego—Distillery.—Eugene Eggert, president Spiritine Manufacturing Co., New Orleans, states he is not ready to furnish details relative to plant recently noted to be established; address home office, Box 6, Winton Pl., Cincinnati, O.

Md., Baltimore—Paper Bags.—B. S. Oles, representing Buffalo company, leased floor 6000 feet square in Johns Hopkins Estate Bldg., Frederick and Lombard Sts.; will equip to manufacture paper bags.

Md., Baltimore—Shirts.—Hanaman Manufacturing Co. (Willard H. Hanaman, 827 W. North Ave. and others) purchased brick building at 305-309 Hickory Ave., Hampden, and will equip as addition to shirt factory.

Mo., St. Louis—Gas, Lime, etc.—Fuel Gas Construction Co., capital stock \$10,000, incorporated by John O. Correy, Albert J. Robus and Hiram B. Morse.

Mo., St. Louis—Registers.—Automatic Ticket Selling & Cash Register Co., capital stock \$20,000, incorporated to manufacture ticket selling and cash register device; Herbert W. Cost, president; D. Arthur Bowman, vice-president; Samuel Bowman, secretary-treasurer; main offices to be in Third National Bank Bldg.

N. C., Graphiteville—Graphite Products.—Piedmont Graphite Co., M. W. Manahan, president, Atlanta, Ga., contemplates installation of additional machinery to increase capacity of Graphiteville plant.

N. C., Hickory—Creamery.—Catawba Creamery Co. increased capital stock, and will enlarge plant.

N. C., Lumberton—Cones.—R. H. Crichton, secretary Industrial Club, is interested in proposed establishment of plant to manufacture pasteboard cones for spinning mills. (See "Machinery Wanted.")

Okla., Sapulpa—Glass.—B. M. Van Orman, secretary, states Sapulpa Commercial Club is considering proposal of company to establish glass factory.

S. C., Greenwood—Glass.—Clarence R. Bethel and associates will establish glass factory; company organized with \$30,000 capital stock.

Tenn., Chattanooga—Refrigerators.—Odorless Refrigerator Co., capital stock \$100,000, incorporated by G. C. Raoul, William Buckel, A. E. Keysar and others.

Tenn., Memphis—Cleaning Preparation.—Dr. Steinberg of Nashville, Tenn., is promoting organization of company with \$100,000 capital stock to manufacture cleaning preparation.

Tenn., Nashville—Automobile Wheels.—Seaton Wheel Co., capital stock \$120,000, incorporated by Granberry Jackson, Samuel S. Lord, B. C. Seaton and others.

Tex., Beaumont—Oil Refinery, etc.—Magnolia Petroleum Co. is reported as having appropriated \$500,000 for improvements, to include enlargement of refinery, erection of plant for manufacturing annually 3,000,000 pounds of lubricating oils, cup grease and axle grease, etc.; has begun work.

Tex., Cisco—Weather Strips.—Perfection Weather Strip Co. incorporated by J. G. Webster, F. M. Oldham and C. H. Fleming.

Va., Norfolk—Sugar Refinery.—Arbuckle Bros., New York, are said to plan construction of sugar refinery (3000 barrels daily capacity) at Norfolk, Baltimore or New Orleans, with Norfolk preferred; they wire Manufacturers Record: "We have no details to furnish at the present time."

Va., Norfolk—Gas.—Norfolk County Gas Co., capital stock \$25,000, incorporated; W. H. Hoffheimer, president; B. B. Ferguson, vice-president; J. M. Umstadter, secretary-treasurer; will build gas plant to supply cottages of Ocean View, Willoughby and Mason's Creek.

W. Va., Charleston—Glass.—Haskins Glass Co., Martins Ferry, O., contemplates building glass works.

MOTORS AND GARAGES

D. C., Washington—Garages, etc.—American Security & Trust Co. awarded contract to Davis Construction Co., Union Trust Bldg., Washington, for two private garages and flats; 20x40 feet; two stories; fireproof

construction; two hot-water heating plants; gas and electric lighting; slag roof; cost \$8000; plans by S. C. Dean, 1001 I St. N. W., Washington; all materials purchased. (Recently noted.)

Ga., Milledgeville—Garage.—R. H. McComb will erect garage on Wilkinson St.; brick construction.

Tenn., Gallatin—Garage.—J. K. White will erect garage and machine shop.

W. Va., Charleston—Garages.—Ruffner Bros. will erect combination garage and stable; two stories; brick; fireproof.

RAILWAY SHOPS, TERMINALS, ROUNDHOUSES, ETC.

Ga., Brunswick—Atlanta, Birmingham & Atlantic Railroad.—Alex. Bonnyman, general manager, Atlanta, Ga., will, it is reported, expend \$1,250,000 of issue of \$5,000,000 in receivers' certificates for enlarging terminals, blasting roadbed, etc. Mr. Bonnyman previously advised Manufacturers Record that J. G. Basinger, civil engineer, 52 Broadway, N. Y., has charge of Brunswick terminal work.

Okla., Henryetta—Missouri, Oklahoma & Gulf Railway.—J. J. Harrison, chief engineer, Muskogee, Okla., will build shops and terminals; cost \$200,000; plans not completed; location not determined.

S. C., Columbia—Seaboard Air Line Railway.—W. L. Seddon, chief engineer, Portsmouth, Va., advises Manufacturers Record that terminal facilities now under construction at Cayce, across river from Columbia, include following: 10-stall reinforced-concrete roundhouse, approximate cost \$22,550; 41x45-foot machine shop, cost \$2300; 85-foot turntable, cost \$6000; yardmaster's office, cost \$1800; combination oil and storehouse, \$1600; cinder pit, \$3000; reinforced 50,000-gallon water tank, \$1900; fire protection, \$5000; track work in yard, \$60,000; machinery and tools, \$7900; contractor for building, Fairbanks, Morse & Co., Chicago, Ill.; tracks, B. F. Langford, Jacksonville, Fla. (Previously noted.)

Tex., Kingsville—St. Louis & San Francisco Railroad.—M. C. Byers, Springfield, Mo., authorized appropriations of \$25,000 for machinery and \$6000 for improvements to shop buildings, roundhouse, etc.

Tex., Dallas—Union Terminal Co. effected organization with following officers: President, F. G. Pettibone; vice-presidents, Thornwell Fay and W. A. Webb; secretary, Murrell L. Buckner; treasurer, R. P. Roach; plans to begin construction within 90 days; will build car and locomotive repair shops, roundhouses, electric plant to furnish light and heat, freight houses, train sheds, passenger station, etc.; passenger depot to be either 1½ or 2 stories high; improvements to occupy 36 acres of land; initial plans provide for present annual traffic of 1,250,000 travelers and future extensions as needed; C. H. Dana will be chief engineer in charge; Mr. Buckner will handle details; facilities are for Gulf, Colorado & Santa Fe, St. Louis & San Francisco, Houston & Texas Central and other railway companies interested; terminal company officials named are prominent officers of those companies; propose expenditure of \$5,000,000. (Previously announced as to be undertaken.)

ROAD AND STREET WORK

Ala., Birmingham—Petition is under consideration to remove granite-block pavement and replace with smooth paving on First Ave. from 18th to 21st St.; about 7000 square yards; Walter G. Kirkpatrick, City Engineer.

Ala., Carbon Hill.—City will lay concrete sidewalks on main business streets; O. H. Whitney, chairman City Commissioners.

Ala., Heflin.—Cleburne county voted bond issue for road construction. Address County Commissioners.

Ala., Decatur.—City will pave Lafayette St. and macadamize old Danville Rd. Address The Mayor.

Ala., Mobile.—Mobile county will construct 10 miles Cedar Point road; Board of Revenue receives bids until July 11; C. L. Strange, County Highway Engineer, Room 11, Bank of Mobile, or P. O. Box 945. (See "Machinery Wanted.")

Ala., Wetumpka.—Elmore County Commissioners receive bids at noon July 9 (not July 19, as recently stated) to grade and surface with gravel four miles State road; amount available, \$8000; also at same time will let \$8000 additional amount, work of same class; W. S. Keller, State Highway Engineer, Montgomery, Ala.; this work previously mentioned. (See "Machinery Wanted.")

D. C., Washington.—Government will grade

certain streets, aggregating 102,000 cubic yards; also lay cement sidewalks; bids received until July 5. Address Commissioners District of Columbia. (See "Machinery Wanted.")

Fla., Miami.—City votes August 27 on \$20,000 bond issue to open, widen and build streets and sidewalks. Address The Mayor.

Fla., Palm Beach.—City voted \$85,000 bond issue to construct ocean boulevard from Lake Worth Inlet to Lantana. Address The Mayor.

Fla., Tampa.—City awarded contract to R. L. Davis for brick paving and to Sidney Houston for curbing.

Fla., West Palm Beach.—Townships 44 and 45 of Palm Beach county vote July 23 on \$90,000 bond issue to widen county road and build Atlantic Blvd., on ocean, through district. Address County Commissioners.

Ga., Atlanta.—City will pave McLenon St. from Moreland to Mayson Ave. with vitrified brick between tracks of Georgia Railway & Electric Co.; about 2300 square yards and outside tracks with asphaltic macadam; about 7900 square yards; bids received until June 28; R. M. Clayton, chief of construction. (See "Machinery Wanted.")

Ga., Cedartown.—City awarded contract to West Construction Co., Chattanooga, Tenn., to pave Main St. with asphalt; 12,000 square yards; H. S. Jaudon Engineering Co., Savannah, Ga., engineer in charge. (Call for bids lately noted.)

Ga., Cordele.—City voted \$95,000 bond issue for paving, etc. W. H. Dorris, Mayor. (See "Water-works.")

Ga., Gainesville.—City awarded contract to Atlantic Bitulithic Co. of Richmond, Va., to pave Main St. with bitulithic; cost \$40,000.

Ky., Maysville.—City awarded contract to James Dawson to construct sidewalks on 6th St., Forest Ave. and Short St., and steps on Sutton St., between 3d and 4th Sts.

Ky., Paducah.—Board of Public Works receives proposals until 10 A. M. July 1 for paving work (contract A), including about 26,000 square feet concrete sidewalks, 1350 square feet concrete driveways, 4900 linear feet concrete gutters, 5000 linear feet granite curbing and 300 linear feet cast-iron drain pipe; also (contract B) reinforced-concrete retaining wall, with approximate quantities of 750 cubic yards excavation, 23,000 pounds reinforcing steel, etc.; and (contract C) reinforced-concrete culvert; L. A. Washington, City Engineer. (See "Bridges, Culverts, Viaducts." See "Machinery Wanted.")

Ky., Williamsburg.—Whitley county contemplates voting September 21 on \$300,000 bond issue to construct roads. Address County Commissioners.

La., Crowley.—City awarded contract to Cressot Wood Block Paving Co. of New Orleans, La., to pave Parkerson Ave. from Mill St. to and around Court Square with cressot wood blocks; 30,000 square yards; R. J. Boudreaux, City Clerk. (Recently mentioned.)

La., Gretna.—Jefferson Parish Police Jury authorized formation of two road districts extending from Harvey to Waggaman and from protection levee to Kenner, La.; districts will vote July 16 on \$125,000 bond issue to construct roads aggregating 20 miles.

La., Lake Charles.—City rejected all bids for recently-noted street paving and will soon readvertise bids; plans and specifications at office of T. H. Mandell, City Engineer; \$100,000 previously stated available.

La., Shreveport.—City received bids until June 25 for laying sidewalks and curbing during one year estimated as follows: 50,000 square feet sidewalks, 20,000 linear feet curbing and 3000 cubic yards earth; L. H. Baker, Secretary-Treasurer. (See "Machinery Wanted.")

Md., Baltimore.—City will pave Park Ave., Lanvale St., etc., included in Contract No. 32; 33,150 square yards with sheet asphalt or bituminous concrete and 1330 square yards with vitrified brick; also E. Front and other streets; Contract No. 33, 9750 square yards with vitrified block; R. Keith Compton, chairman Paving Commission. (See "Machinery Wanted.")

Md., Baltimore.—Commissioners for Opening Streets, Eugene E. Grannan, president, awarded following contracts for street paving: F. E. Schneider Paving Co., Monroe and Lorman Sts., at \$27,987, three contracts for sheet asphalt paving; P. Flanagan & Sons, 120 E. Lexington St., at \$14,264, contract No. 6, 34th St., Greenmount Ave. to Tinges La., 4800 square yards; Elder Paving & Contracting Co., 524-526 Law Bldg., contract No. 7, 40th St., Roland Ave. to University Parkway, 7900 square yards. (Call for bids lately noted.)

Md., Baltimore.—Board of Awards, City Hall, receives bids until July 3 to construct roadway at Back River disposal plant; plans and specifications at office of Sewerage Commission, 904 American Bldg. (For further details see "Machinery Wanted.")

Md., Baltimore.—Board of Awards awarded contract to Martin J. Beach, 801 American Bldg., Baltimore, for vitrified block paving; Contract No. 21 at \$8069; Contract No. 22 at \$7436; Contract No. 23 at \$3322; Charles A. Edel, secretary Paving Commission. (Previously noted.)

Md., Baltimore.—City will pave Orem, Parkwood and Woodbrook Aves. with sheet asphalt; 5600 square yards; bids received until July 3; Eugene E. Grannan, president Commissioners for Opening Streets. (See "Machinery Wanted.")

Md., Rockville.—George E. Hamilton (Hamilton, Yerkes & Hamilton), Union Trust Bldg.; John Joy Edson (president Washington Loan & Trust Co.), F and 9th Sts. N. W., both of Washington, D. C., and others are interested in repair of Rockville pike from District line to Rockville, about eight miles; cost estimated at \$30,000; Montgomery County Commissioners appropriated \$12,000 toward construction.

Mo., West Plains.—West Point Road District of Howell county voted \$30,000 bond issue to build rock roads. Address District Commissioners.

Okla., McAlester.—City will grade, pave, curb, gutter and drain South Main St. from Sandy Creek Improvement to Comanche Ave.; improvements to consist of concrete pavement 6 inches thick, concrete curbs and gutters; width, 30 feet between curbs; bids received until July 5; B. A. Enloe, Jr., Mayor; J. M. Gannaway, City Clerk. (See "Machinery Wanted.")

Okla., McAlester.—City will grade, gutter, curb, drain and pave Grand, Washington and Adams Aves., A, B, C, D and E Sts.; B. A. Enloe, Jr., Mayor.

Tenn., Benton.—Polk County Commissioners, J. H. Williamson, chairman, awarded contract to W. T. Center and Russell, Denton & McClary Bros. to grade and macadamize road from Ducktown Station via Ducktown and Isabella to Copper Hill, seven miles; roadbed 16 feet wide; eight feet to be macadamized with six inches of stone or slag and four inches of top dressing. B. H. Case is engineer in charge. (Call for bids lately noted.)

Tenn., Charlotte.—Dickson County Turnpike Co., E. H. Stone, president, awarded contract to Boyte Williams of McMinnville, Tenn., to construct road from Charlotte to Dickson, eight miles; J. R. Nebbett, engineer. (Call for bids lately noted.)

Tex., Abilene.—City votes July 29 on \$30,000 bond issue to improve streets. E. N. Kirby, Mayor. (Recently mentioned.)

Tex., Gilmer.—Upshur County Commissioners awarded contract to McEleath & Wilson to construct 50 miles road.

Tex., Fort Worth.—H. P. Hayes, County Road Engineer, is surveying roads to be improved under \$1,000,000 bond issue previously reported voted; roads already surveyed include Fort Worth to Mansfield, 25 miles; Fort Worth to Denton county line, passing through Birdville and Grapevine, 27 miles; Grapevine to Dallas county line, 8 miles; Arlington to Grapevine, 16 miles; Fort Worth to Keller, about 25 miles, and from Dallas county line through Euless to Bedford to Grapevine turnpike; roads to be surveyed include those to Azle, Crowley and Weatherford and White Settlement road.

Tex., Franklin.—Precinct No. 2 of Robertson county (including Hearne, Mumford, Benchley and Elliott) will vote July 19 on \$150,000 bond issue for road construction. Address County Commissioners.

Tex., Houston.—Magnolia Park Land Co., Carter Bldg., awarded contract to George R. Kelly for grubbing, blowing out stumps, grading and excavating for street work in Central Park; Howe & Wise, civil engineers, 722 First National Bank Bldg., Houston. (Call for bids lately noted.)

Tex., Kaufman.—Kaufman county votes June 29 on \$200,000 bond issue for road construction. Address County Commissioners.

Tex., Marshall.—City voted \$28,000 bond issue to macadamize streets. Address The Mayor. (Previously mentioned.)

Tex., Richmond.—Fort Bend County Commissioners authorized formation of Road District No. 2; votes on \$150,000 bond issue for road construction.

Tex., Paris.—Lamar County Good Roads Commission awarded contract to O'Neill Engineering Co., Dallas, Tex., for road construction; 40 to 48 miles rock roads; \$20,000

available; M. Hannah, engineer. (Previously mentioned.)

Tex., Palestine.—Anderson County Commissioners awarded contract to Lackland & Carroll of Palestine to construct about 20 miles of sand-clay roads; cost about \$40,000; W. H. Harding, County Judge. (Recently mentioned.)

Tex., Sherman.—City votes July 25 on \$198,000 bond issue to pave streets, etc. Address The Mayor. (See "Schools.")

Tex., Victoria.—Victoria county will construct 24 miles gravel roads in road district No. 2; bids received until June 25; L. A. Goerlinger, County Engineer.

Va., Norfolk.—F. J. McGuire is lowest bidder for Lochhaven (suburb) improvements recently noted; 19,000 yards paving; 16,000 feet concrete curb and gutter; 5500 square yards granolithic walk; Arthur C. Freeman, Jr., consulting engineer for American Boulevard Corporation.

Va., Portsmouth.—City will pave with vitrified brick, on 5-inch concrete base, roadway of 1st St. from Causeway to Navy-yard gate; 5-inch granite curbing; L. P. Slater, City Clerk, receives bids until July 2. (See "Machinery Wanted.")

Va., Rustburg.—Campbell County Supervisors appropriated \$4150 to macadamize Langhorne's Rd. leading from Rivermont Ave. toward Forest Turnpike; appropriation to be increased by like contribution from residents on route.

Va., Tazewell.—Tazewell county will grade about 18 miles of road in Jeffersonville District; bids received until July 9; R. B. Daniel, chairman County Supervisors. (See "Machinery Wanted.")

W. Va., Charleston.—City will pave with brick and sewer Duffy St. from Washington to McClung St.; bids received until July 1; J. R. Ross, recorder; G. S. Brown, engineer. (See "Machinery Wanted.")

W. Va., Huntington.—City will grade, curb and pave with vitrified brick 4th and 5th Sts., Eighth Ave. and several alleys; bids received until July 22; L. A. Pollock, Commissioner of Streets; A. B. Maupin, City Engineer. (See "Machinery Wanted.")

W. Va., Mannington.—Mannington District voted \$300,000 bond issue for road improvements; proposes brick pavement with concrete curbs; 20 miles road; engineer in charge, A. M. Glover, County Engineer, Fairmont, W. Va.; lately mentioned. (See "Machinery Wanted.")

SEWER CONSTRUCTION

Ark., Conway.—Trustees Hendrix College authorized construction of sewer system. (See "Schools.")

Ark., Mena.—H. W. Carwell is making surveys for extending sanitary sewer system; 14,000 feet 6, 8 and 10-inch pipe; cost \$10,000.

Fla., Jacksonville.—Army Board, State of Florida, awarded contract to F. S. Perham, South Jacksonville, Fla., at \$11,922 to construct sanitary sewer system at State Camp Grounds; 2 1/2 miles pipe, 6 to 12 inches; manholes, flush tanks, etc.; Wm. W. Lyon, consulting engineer, 305 Duval Bldg., Jacksonville; Major Fred G. Yerkes, secretary, 1620 E. Bay St. (Call for bids lately noted.)

Fla., Miami.—City votes August 27 on \$15,000 bond issue for sewer construction. Address The Mayor.

Ga., Cordele.—City voted \$95,000 bond issue to extend sewer system, etc. W. H. Dorris, Mayor. (See "Water-works.")

Ga., Oakhurst.—City retained J. B. McCrary Company, Third National Bank Bldg., Atlanta, Ga., to prepare plans for improvements to sewer system.

Ga., Sparks.—City retained J. B. McCrary Company, Third National Bank Bldg., Atlanta, Ga., to prepare plans for proposed sewer improvements.

Ga., Vidalia.—City engaged J. B. McCrary Company, Third National Bank Bldg., Atlanta, Ga., to prepare plans for construction of sewer system previously noted. (See "Electric Plants.")

La., New Orleans.—Hampton Reynolds is probably lowest bidder at about \$417,000 to construct Metairie Relief and Broad St. Canal, three miles long, including wood lining of subchannel; F. S. Shields, secretary Sewerage and Water Board, 508 City Hall Annex. (Call for bids lately noted.)

Md., Baltimore.—City awarded contract to Ryan & Reilly, Union Trust Bldg., Baltimore, at \$44,240 to construct miscellaneous lateral sewer, Contract No. 90; 16,000 linear feet vitrified pipe sewer, 8 to 24 inches diameter, and 3100 linear feet vitrified pipe house connections; Calvin W. Hendrick,

chief engineer Sewerage Commission, 904 American Bldg. (Call for bids lately noted.)

Md., Baltimore.—Board of Awards, City Hall, receives bids until July 3 to build storm-water drains; contract No. 21; certified check for \$3000. Receives bids until July 3 for laying house connections across footways in districts 29 and 30; certified check \$2300; plans and specifications at office of Calvin W. Hendrick, chief engineer Sewerage Commission, 904 American Bldg. (For further details see "Machinery Wanted.")

Miss., Senatobia.—Town contemplates constructing sewer system. Address Town Clerk.

Miss., West Point.—City votes July 2 on bond issue for sewer extension. Address The Mayor.

Mo., Sweet Springs.—City will construct sanitary sewer system; bids opened June 25; Leaming & Blaine, consulting engineers, Sedalia, Mo.; Edward Reeves, City Clerk.

N. C., Carthage.—Town will construct sewer system and water-works; bids received until July 16; W. G. Jennings, secretary; engineer, J. B. McCrary Company, Third National Bank Bldg., Atlanta, Ga. (See "Machinery Wanted.")

N. C., Monroe.—City will construct recently-noted sewer system; receives bids until 5 P. M. July 15; Southern States Engineering Co., Memphis, Tenn., consulting engineer. (See "Machinery Wanted.")

Okla., Skiatook.—City voted \$3000 bond issue to construct sewer system. Address The Mayor.

S. C., Greens.—City retained J. B. McCrary Company, Third National Bank Bldg., Atlanta, Ga., to prepare plans for proposed sewer system improvements.

Tenn., Chattanooga.—City will construct brick main sewer on 17th, Cowart and Union Sts., including lateral sewers on Main, Alabama and Market Sts.; bids received until July 5; A. N. Sloan, Department Streets and Sewers. (See "Machinery Wanted.")

Tex., Bartlett.—City will construct sewer system; civil engineers are making surveys. Address The Mayor.

Tex., Clarksville.—City receives bids until July 10 to construct eight miles of sewers; estimated cost, \$25,000; John R. Webb, City Clerk. (Recently mentioned.)

Tex., Fort Worth.—City will construct Jarvis St. storm sewer, portion of De Zavalla St. storm sewer and extension of present Lipscomb St. storm sewer under St. Louis & San Francisco Railroad tracks; cost \$5500, \$7000 and \$3000, respectively; bids received until June 25; F. J. Von Zuben, acting City Engineer; J. H. Maddox, Commissioner Streets and Public Property.

Tex., Houston Heights.—Howe & Wise, engineers, 722-723 First National Bank Bldg., Houston, Tex., are preparing plans for storm sewer system and drainage, estimated to cost \$10,000, in connection with building 10 miles of graveled streets and paving boulevard; cost of sewers to be provided for out of \$180,000 bond issue voted for street improvements. (Previously further noted under "Road and Street Work.")

Tex., San Benito.—City is having plans prepared for extending sewer system and constructing two sewage-disposal plants; amount available, \$30,000; Bruce Frazier, City Secretary. (Recently mentioned.)

Tex., Sherman.—City votes July 25 on \$198,000 bond issue to extend sewer system, etc. Address The Mayor. (See "Schools.")

Va., Chase City.—J. B. McCrary Company, engineers, Third National Bank Bldg., Atlanta, Ga., has prepared plans for previously-noted sewer system.

Va., Abingdon.—City will vote July 16 on \$35,000 bond issue for recently-noted sewer construction; about 10 miles 6, 8, 10 and 12-inch salt-glazed vitrified-clay pipe; Wm. Dunlap, engineer, Bristol, Tenn.; construction bids received until noon July 6; plans, etc., with Geo. F. Grant, chairman. (See "Machinery Wanted.")

W. Va., Charleston.—City will construct sewers on Duffy St.; G. S. Brown, engineer. (See "Road and Street Work.")

TELEPHONE SYSTEMS

Ark., Hampton.—Hampton Telephone Co., capital stock, \$10,000, incorporated by H. C. Black, W. R. Fea and C. C. Mason.

Ky., Birmingham.—Birmingham Telephone Co., incorporated by M. R. Cox, V. M. Cox and Charles Smith.

Ky., Nuckols.—Farmers' Mutual Co-operation Telephone Co. incorporated by W. M. Humphrey, J. D. Vance, A. H. Lee, W. W. Mitchell and J. W. Taylor.

Ky., Springdale.—Springdale & Tollesboro

Mutual Telephone Co. organized to construct telephone system from Springdale to Tollesboro, connecting with Gearis, Cottageville, Maysville, etc.; Landon Hull is president; A. D. Keith, secretary-treasurer.

Tenn., Ripley.—Union Telephone Co. incorporated by J. A. Porter, J. A. Johnson, J. R. Lewis, A. I. Dorsey and J. W. Sanford; will operate telephone system from Gold Dust to Ripley.

TEXTILE MILLS

Ala., Shawmut-Cotton Duck.—West Point (Ga.) Manufacturing Co. will add 5000 spindles, 36 cards, warpers, spoolers, looms, electric motors, etc.; electric power; has awarded all contracts. (Recently mentioned.)

Ga., Senola.—Cotton Duck.—Senola Duck Manufacturing Co. incorporated with \$100,000 capital stock by W. A. Robinson, G. N. Robinson and E. P. Robinson; continues established cotton duck mill.

Mo., St. Louis-Cordage.—American Manufacturing Co. will not enlarge mill; recent report was error; is building warehouse to increase storage facilities.

N. C., Burlington.—Cotton Yarns.—King Cotton Mill Corporation purchased Bellevue Mills; brick buildings; 3300 spindles, etc.; capital stock \$50,000; president, H. D. Eichelberger of Richmond, Va.; vice-president, I. G. King; secretary, J. M. Browning; both of Burlington. (Recently reported incorporated under Va., Richmond.)

N. C., Burlington.—Hosiery.—W. Jess Thompson will install 20 machines to knit hosiery; has awarded contract.

N. C., Gastonia.—Combed Yarns.—C. B. Armstrong plans organization of company to build cotton mill; equipment to include 22 cards, two sets of combers, spindles, looms, etc.

N. C., Charlotte.—Cotton Goods.—Thayer Manufacturing Co. awarded buildings contract to Fiske-Carter Construction Co. (11 Foster St., Worcester, Mass., and Greenville, S. C.) as lately stated; includes two-story 153x225 foot spinning mill, one-story 163x211-foot weave shed, with saw-tooth roof, both of standard brick mill construction, using steel beams; 43x47-foot boiler-house; heating and lighting not included in Fiske-Carter contract; plant to have 25,000 spindles and 500 looms, etc.; architect-engineer and treasurer of Thayer Manufacturing Co., O. A. Robbins of Charlotte. (Previously reported organized, etc.; capital stock, \$500,000.)

N. C., Hickory.—Cotton Goods.—Ivey Mills Co. will, it is reported, build another cotton mill.

S. C., Greenville.—Print Cloth.—Carolina Mills will build additional mill; two stories, 105x230 feet; full-story basement one end; brick and timber; slow-burning mill construction; equip for slashing, weaving and cloth room; make changes in present mill and equip with preparatory machinery; building contractor, Gallivan Building Co. of Greenville; architect-engineer, Lockwood, Greene & Co., 93 Federal St., Boston; Carolina company will add about 12,000 spindles and 350 looms driven by electric power. (Recently mentioned as to vote on capital increase from \$200,000 to \$400,000 and to double plant.)

S. C., Lancaster.—Cotton Goods.—Leroy Springs, president of Lancaster Cotton Mills, is reported as to add to his company's equipment or build another mill.

Tex., McKinney.—Cheviots, etc.—Texas Cotton Mill Co. will increase capital stock from \$190,000 to \$220,000; plans to increase capacity; has 249 ring spindles, 160 looms, dyeing and finishing machinery, etc.

Tex., Richmond.—Hosiery, Twine, etc.—H. M. Shannon proposes installing machinery to manufacture hosiery, twine, toweling, etc., from cotton gin waste and rugs from old carpets. (See "Machinery Wanted.")

WATER-POWER DEVELOPMENTS

Ala., Gadsden.—Coosa River Electric Power Co. plans to construct hydro-electric plant at Lock No. 2 at Ten Island Shoals on Coosa River, 18 miles from Gadsden and Anniston and 48 miles from Birmingham; proposes initial installation to develop 25,000 horsepower and in future to double this amount; estimated cost of plant and transmission lines \$2,000,000; authorized capitalization \$5,000,000; offices at Birmingham, Ala.; president, Roswell H. Cobb of Gadsden; vice-president, Robert D. Johnston; treasurer, D. K. Miller; secretary, Chappell Corey. (Previously reported organized, etc.)

Fla., Brooksville.—Brooksville Electric Light & Power Co. contracted with Florida Power Co. (Ocala, Fla.) for electricity from latter's hydro-electric plant on Withlacoo-

chee River, 25 miles below Dunnellon; Florida Power Co. will extend transmission wires from Istochatta to phosphate mines at Croome and thence 10 miles west to Brooksville.

Tenn., Chattanooga.—Tennessee Eastern Power Co., capital stock \$40,000, incorporated by G. C. Lancaster, L. N. Spears, Lewis M. Coleman and others.

Tenn., Greeneville.—East Tennessee Electric Co. wires Manufacturers Record: "Propose plant on Nolachucky River nine miles from Greeneville; concrete power-house; gravity section dam; power-house designed for four units of 2500 kilowatts each; two units will be installed now; balance as market demands; president and chief engineer, W. V. N. Powelson, 60 Wall St., New York, and Greeneville, Tenn."

Tenn., Mascot.—American Zinc Co., care Chas. Milne Seymour, East Tennessee National Bank Bldg., Knoxville, Tenn., is reported as to build hydro-electric plant on Holston River.

WATER-WORKS

Ala., Birmingham.—Board of Commissioners directed City Engineer W. G. Kirkpatrick to make preliminary plans for water-works system. (Bond issue of \$5,000,000 previously noted proposed.)

Ala., Haleyville.—City will expend \$20,000 on water-works and electric plant; erect power-house and (about) 150-foot tower with 200,000-gallon tank; construction to follow sale of bonds; M. S. Drewry, City Clerk.

Ark., Gurdon.—St. Louis, Iron Mountain & Southern Railway, H. E. Hale, engineer M. W. Little Rock, Ark., will build reservoir to furnish sufficient water for locomotives and machine shops; cost \$18,000.

Fla., Winter Park.—City will vote on \$10,000 bond issue to construct water-works. Address The Mayor.

Ga., Augusta.—Special correspondent wires Manufacturers Record that city voted \$100,000 bond issue for water-works extensions and improvements recently noted; Nisbet Wingfield, Commissioner of Public Works. (See "Miscellaneous Construction.")

Ga., Cordele.—City voted \$95,000 bond issue for improving water-works, extending sewer system, paving and erecting school. W. H. Dorris, Mayor. (Recently mentioned.)

Ga., Midville.—City retained J. B. McCrary Company, Third National Bank Bldg., Atlanta, Ga., to prepare plans for proposed water-works improvements.

Ga., Oakhurst.—City retained J. B. McCrary Company, Third National Bank Bldg., Atlanta, Ga., to prepare plans for water-works improvements.

Ga., Vidalia.—City engaged J. B. McCrary Company, Third National Bank Bldg., Atlanta, Ga., to prepare plans for previously-noted water-works improvements. (See "Electric Plants.")

Ga., Wrens.—City retained J. B. McCrary Company, Third National Bank Bldg., Atlanta, Ga., to prepare plans for water-works improvements.

Md., Baltimore.—Water Board decided to construct mechanical filtration plant, costing \$1,633,000, near Loch Raven; report indicating this decision submitted by George W. Fuller of New York; city will have plans prepared by expert to be engaged by Ezra B. Whitman, Water Engineer, City Hall.

Mo., Hermann.—City is having plans and specifications prepared for water-works to cost \$25,000; will vote July 20 on bond issue. Address The Mayor.

N. C., Carthage.—Town will construct water-works and sewer system; bids received until July 16; W. G. Jennings, secretary; J. B. McCrary Company, engineer, Third National Bank Bldg., Atlanta, Ga. (See "Machinery Wanted.")

Okla., Butler.—City awarded contract to Kennedy & Fleming, State National Bank Bldg., Oklahoma City, Okla., for constructing water-works; \$10,000 bond issue.

Okla., Hastings.—City voted \$15,000 bond issue to complete water-works. Address The Mayor.

Okla., Kenebec.—City water-works (bids recently noted received until June 24) include construction of pump-house and 60,000-gallon elevated steel tank; capacity 120,000 gallons 10 hours; cost \$15,000; plans by J. E. Davis, Caddo; W. E. Strickland, Clerk.

S. C., Greens.—City retained J. B. McCrary Company, Third National Bank Bldg., Atlanta, Ga., to prepare plans for proposed water-works improvements.

Tenn., Coal Creek.—Coal Creek Water Co.,

capital stock \$10,000, incorporated by J. W. Jarnigan, Samuel Watts, George W. Wendling and others. (This is name of company recently reported to be incorporated.)

Tenn., Halls.—James Z. George of Memphis, Tenn., purchased plant of Halls Light, Water & Ice Co.; laying water mains in business district. (See "Electric Plants.")

Tex., Cleburne.—City awarded contract to N. S. Sherman of Oklahoma City, Okla., at \$5277 to lay four miles six-inch and one mile four-inch cast-iron pipe; to J. A. Thomas at \$7777.77 to erect brick pumping station, 48x100 feet, and to Faucett & Hall to drill well of eight-inch diameter and 1200 feet deep; Burns & McDonnell, engineers, Kansas City, Mo.; C. W. Breech, Mayor. (Recently mentioned.)

Tex., Dallas.—City will construct previously-noted water purification plant at Turtle Creek pumping station; bids received until 2 P. M. July 17; plans and specifications at offices of James H. Fuertes, 140 Nassau St., New York, or of City Secretary, J. B. Winstlett, Dallas. (See "Machinery Wanted.")

Tex., Sherman.—City votes July 25 on \$198,000 bond issue to extend water-works, etc. Address The Mayor. (See "Schools.")

Va., Bridgewater.—City will construct water-works; cost \$25,000; capacity 100,000 gallons daily; date of opening bids not set; erect frame or concrete 16x20-foot pump-houses; L. V. Miller, chairman water committee.

Va., Chase City.—City had plans prepared by J. B. McCrary Company, Third National Bank Bldg., Atlanta, Ga., for previously-noted water and sewer systems.

WOODWORKING PLANTS

Ala., Union Springs.—Hendles.—Caldwell-Edwards Handle Mills (recently noted) incorporated with \$16,000 capital stock) will manufacture hickory handles; daily capacity, 125 dozen; G. M. Edwards, president; S. J. Caldwell, Jr., secretary-treasurer.

Ark., Aurora.—Headings, etc.—Arkansas Star Heading Co. will establish stave and heading mill.

Ga., Rome.—Heading.—J. R. Brown, Attalla, Ala., contemplates building heading mill.

Ga., Valdosta.—Buggies and Wagons.—Valdosta Buggy & Wagon Works, capital stock \$2000, incorporated by James Chambers, J. M. Alderman and C. L. Jones.

Md., Baltimore.—Barrels.—C. Weisbrod Cooperage Co., capital stock \$5000, incorporated by J. Robert Woods of Lutherville, Md.; Mrs. Sophia Weisbrod and Walter Weisbrod.

Md., Baltimore.—Furniture.—George Spindler, 608-610 W. Pratt St., will erect factory building in rear of present plant; four stories; brick; 50x80 feet; mill construction; cost \$12,000; plans by Henry E. Feldhaus, 2627 N. Calvert St.; contract let to Fidelity Construction Co., 64 Knickerbocker Bldg., Baltimore; no further machinery needed at present; manufacture upholstered furniture.

N. C., Black Mountain.—Staves.—Dickie & Campbell plan to build stave mill costing \$30,000 to utilize by-product of lumber mill.

Tenn., Carthage.—Spokes.—Carthage Hickory Spoke Works, Livingston, Tenn., will establish at Carthage the woodworking plant recently noted under Livingston, Tenn.; erect mill-construction building; has purchased machinery; daily capacity 5000 finished spokes; J. C. Billrey, president and manager; Roscoe McGinnis, secretary-treasurer; Geo. N. Welch, vice-president, Monterey, Tenn.

Tenn., Chattanooga.—R. E. J. Steele of Norfolk, Va., and associates contemplate, it is reported, establishing plant.

Va., Smithfield.—Truck Barrels, etc.—W. H. Sykes, Box 85, contemplates installation of veneer machinery, etc., to manufacture truck barrels, pea baskets and butter dishes in connection with present sawmill. (See "Machinery Wanted.")

Virginia.—Staves.—Virginia Stave Co., capital stock \$25,000, incorporated by H. D. Nims and E. G. Chamberlain of Bronxville, N. Y., and W. E. Mitchell of Montclair, N. J.

BURNED

Ala., Birmingham.—Residences of E. K. Layton, J. W. Barnard and Dr. J. W. Stagg on Highland Ave.; loss \$15,000.

Ala., Birmingham.—R. F. Johnson's residence at 1015 S. 17th St.; loss \$5000.

Ala., Montgomery.—Alabama Auto Co.'s garage at Court Bibb and Tallapoosa Sts.; loss \$10,000.

Ark., Dardanelle.—People's Bank, West Bros.' store, Dr. S. E. Miller's office, Dr.

Love's office, Telephone Exchange, post-office.

Ark., Malvern.—Mrs. Elizabeth Rhineheart's residence.

Fla., Micanopy.—Melton Lumber Co.'s saw-mills.

Ky., Carlisle.—James O'Neill's livery stable; loss \$5000.

Ga., Crumps Park.—Buildings owned by D. P. Bram and C. E. Schofield; loss \$5000. (Buildings of Walter D. Brigham recently noted burned.)

Ga., Macon.—Dwellings of G. W. Smith, 109 Cherokee Ave.; T. R. Hatcher, 105 Cherokee Ave., and B. T. Bethune, 111 Cherokee Ave.; total loss about \$17,000.

Ga., Macon.—Hepzibah Orphanage's three buildings; loss \$11,000.

Ky., Hartford.—Hartford College; loss \$20,000.

Ky., Dixon.—Townsend Bros.' store; loss \$10,000.

La., Covington.—Frederick & Singletary's sawmill and drykiln; loss about \$25,000.

Miss., Magee.—Carr Drug Co.'s store; E. J. Harrison & Co.'s store; S. D. Purser's build-

ing; F. M. Brooks' store; Commercial Bank Bldg. damaged.

Mo., Webb City.—Southwest Supply Co.'s shops at Hall and Main Sts.; loss \$10,000.

N. C., Burlington.—R. W. Vincent's roller flour mill; loss \$4000.

S. C., Chester.—J. Foster Carter's residence on E. Lacy St., owned by Mrs. Sallie Triplett Morriss, Petersburg, Va.; loss \$3000.

Tenn., New Market.—Elmore House, owned by James Elmore; loss \$5000.

Tex., Beaumont.—V. Wiess' residence at 1109 Liberty Ave., occupied by H. A. McKenzie and W. J. Rhymes; loss \$3500.

Tex., Beaumont.—Mrs. R. R. Hymes' residence at Liberty and Forest Sts.; loss \$4000.

Tex., Dallas.—P. Levine & Co.'s cotton pickery at 605 23d St. damaged; loss about \$5000.

Tex., Elctra.—Powell & Meyer's two stores; Friend & Puckett Company's store; Crockett & Fisher's store; residences of Snow & Gordon, W. A. Cannon and A. N. Richardson; buildings owned by Luther Brazzil, C. L. Aven and J. A. Fisher; total loss, \$100,000.

BUILDING NEWS

BUILDINGS PROPOSED

APARTMENT-HOUSES

D. C., Washington.—George W. Bouy will erect apartment-house at 119-121 Massachusetts Ave. N. W.; cost \$25,000.

Ga., Savannah.—J. H. McKenna will erect three two-story apartment-houses on E. Charlton St.

Ky., Louisville.—Christian Stege, Sr., will rebuild apartment-house at 1st St. and Magnolia Ave., recently burned; two apartments; cost \$10,000.

Mo., St. Louis.—A. H. Frederick, 11 N. 7th St., has plans by Edward F. Nolte, 1101 Fullerton Bldg., St. Louis, for apartment-house; two buildings; six apartments each; 45x55 feet; three stories; ordinary construction; steam heat; electric wiring; composition gravel roof; cost \$38,000; contracts will be sublet.

Mo., St. Louis.—L. H. Levy will erect three-story tenement-house at 5795 Berlin St.; cost \$35,000.

Mo., St. Louis.—Joseph Schmidt will erect two-story tenement-house at 1507-9 Menard St.; cost \$5400.

Mo., St. Louis.—Traders' Investment Co. will erect four and five-room single flats on Natural Bridge Rd.

Mo., St. Louis.—Charles T. Jones will erect single flat on Palm St.

Mo., St. Louis.—Mrs. A. Vauck will erect two-story tenement-house at 2020 Allen St.; cost \$4000.

Mo., St. Louis.—August Roepke will erect two-story tenement-house at 3619 N. 14th St.; cost \$4000.

Mo., St. Louis.—A. Meyer will erect two-story tenement-house at 4438 Gibson St.; cost \$4500.

Mo., St. Louis.—J. H. Belz will erect two-story tenement-house at 3637-39 Liermann St.; cost \$6000.

Mo., St. Louis.—Alphonse Naert purchased site bounded by Tennessee St., Louisiana Ave., Grand Ave. and Delore St., and will erect number of apartments to contain two four-room suites and number of residences of seven and eight rooms.

Mo., St. Louis.—J. Feldhaus will erect two-story tenement-house at 5406-8 Florissant St.; cost \$6400.

Mo., St. Louis.—O. F. Mack will erect two-story tenement-house at 5931 Ridge St.; cost \$7000.

N. C., Greensboro.—L. Scott Reynolds and George W. Patterson are reported as interested in erection of apartment-house at Fayetteville and Ashboro Sts.; three stories; private stairways, steam heat; six stores on ground floor; also planned to open street, provide court and erect five and six-room dwellings facing same; cost \$50,000 to \$60,000.

Va., Richmond.—Miss Elizabeth V. Lee will erect detached two-story brick tenement-house on Kensington Ave.; cost \$10,000.

Va., Richmond.—Marcus Hallett, Richmond, and Greenville Temple Snelling, 114 E. 28th St., New York, prepared plans for apartment-house at Grace and Monroe Sts.; Mr. Snelling wires Manufacturers Record: "Structure will be 33x149 feet; three stories

and basement; 18 apartments of two and three rooms, bath and kitchenette; steam heat; passenger elevator."

Va., Portsmouth.—L. B. Whatley will erect apartment building and two residences; pressed brick and stone fronts; two stories; cost \$14,000 to \$15,000.

Va., Richmond.—S. G. Meredith will erect two-story brick tenement-house; two stores and two apartments; cost \$4500.

Va., Richmond.—Ed Whitlock and Byron Bear will erect four-story brick tenement-house; to contain three stores; cost \$25,000.

ASSOCIATION AND FRATERNAL

Ala., Gadsden.—Apollo Lodge, Independent Order of Odd Fellows, has plans by C. F. Tye, Gadsden, for lodge building; two stories; brick; 50x75 feet; cost \$5000. (Recently noted.)

Ark., Little Rock.—Young Men's Christian Association, A. A. Traver, secretary, has plans by H. J. Harker, 702 State Bank Bldg., Little Rock, to remodel association building; date of opening bids not set. (Recently noted.)

Fla., Tampa.—Tampa Lodge No. 708, Benevolent and Protective Order of Elks, accepted plans by Holmboe & Lafferty, Clarksburg, W. Va., for lodge building recently noted to cost \$90,000 to \$100,000.

Ga., Atlanta.—Trustees Central Baptist Church, Rev. C. A. Ridley, pastor, 52 Cooper St., will open bids September 1 to erect association building, etc. (See "Churches.")

Ga., Savannah.—Grand United Order of Odd Fellows has plans by J. De Bruyn Kops, Savannah, for lodge and store building on Burroughs near Cuyler St.; four stories; brick; 60x105 feet; ordinary construction; brick and terra-cotta; steam or vapor heat; electric lighting; tin or tar and gravel roof; cost \$24,000.

Ky., Newport.—Newport Turners' Society has plans for home at 6th and Orchard Sts.; cost \$30,000.

N. C., High Point.—Elks' Home Co. incorporated with authorized capital stock of \$50,000 by George A. Melton, Dalls Zollcoffer, F. J. Perkins and others; will erect home for Benevolent Protective Order of Elks; 52x70 feet; two stories and basement; pressed brick veneer; granite trimmings; electric lighting; gravel and tar roof; cost \$11,000; plans by W. C. Northrup, Winston-Salem, N. C.

Tenn., Chattanooga.—Lookout Temple Co. will erect lodge and business building to be occupied by Lookout Lodge No. 250, Independent Order of Odd Fellows.

Tex., Hillsboro.—Ancient Free and Accepted Masons are having plans prepared for business and lodge building; three stories.

W. Va., Beckley.—Beckley Fraternal Association incorporated with \$30,000 capital stock by John W. McCreary, T. H. Wickham, W. L. Foster and others; will erect store and lodge building; three stories; brick or stone.

W. Va., Huntington.—Salvation Army is having plans prepared by E. N. Alger, Huntington, for citadel; cost about \$15,000. (Previously noted.)

BANK AND OFFICE

Ala., Greenville.—First National Bank of Greenville will remodel building; extend same 16 feet, install double vault and additional fixtures.

Ala., Marion.—Marion Central Bank, A. F. Armstrong, president, will receive bids until July 5 to erect two-story brick bank and office building according to plans by W. E. Beams, architect, Birmingham, Ala.; certified check for \$300; completion by October 1; plans and specifications at Builders' Exchange, Birmingham, Ala., and office of Mr. Armstrong, at Marion.

Ala., Tallahassee.—People's Savings Bank will erect bank building and store building; both of brick.

Ark., Warren.—Merchants and Planters' Trust and Savings Bank will probably let contract July 15 to erect bank, office and store building; 70x90 feet; to contain bank room, two storerooms and 24 offices; brick; steam heat; electric lighting; cost \$20,000; plans by Witt, Siefert & Co., Texarkana, Ark.; plans ready about July 10. Carl Halls may be addressed.

D. C., Washington.—Seventh Street Savings Bank, Somerset Waters, president, 1840 Monroe St., will erect bank building at 7th and N. Sts. N. W.

D. C., Washington.—Capitol Savings Bank is having plans prepared by Milburn, Heller & Co., Union Savings Bank Bldg., Washington, for building at 731 N. Capitol St.

D. C., Washington.—George L. Whitford, 416 5th St. N. W., is having plans prepared by Arthur B. Heaton, 1319 F St. N. W., Washington, for office building at 424 5th St. N. W.; three stories; 26x96 feet; cost \$16,000.

Fla., Auburndale.—R. E. Thomas will expend \$2000 to \$7000 to erect bank, office and store building; 55x60 feet; brick; lighting not determined; 6x55-foot concrete sidewalk; plans by H. Leslie Scott, Lakeland, Fla.; contract will probably be let locally. (Recently noted.)

Fla., Miami.—William Burdine & Son will erect five-story-and-basement store and office building. (See "Stores.")

Fla., Palmetto.—J. A. Lamb will receive bids until July 1 to erect two-story brick store and office building; 90x65 feet.

Ga., Atlanta.—Special correspondent wires Manufacturers Record: "Reported C. W. Hunnicutt leased property to Travelers' Bank & Trust Co. for immediate erection of 18-story structure."

Ga., Savannah.—B. T. Adams will erect two store and office buildings. (See "Stores.")

Ky., Louisville.—Southern National Life Realty Corporation, J. M. Ray, secretary, engaged Joseph & Joseph, Louisville, to prepare plans for office building at 4th and Market Sts.; 25 stories, basement, sub-basement and observation tower surrounded by balcony; granite base; glazed brick, stone and terra-cotta finish; interior to have Siena and verd antique marble wainscoting; three traction type elevators; 230 offices; fireproof construction; probably 43 feet 2 inches by 63 feet 1 inch; cost about \$325,000. (Previously noted.)

Ky., Louisville.—John P. Starks, 318 Paul Jones Bldg., has plans by McDonald & Dodd, Louisville, and D. H. Burnham & Co., Chicago, Ill., for office building at 4th and Walnut Sts.; will receive bids until July 2 for erection; brick with terra-cotta trimmings; 15 stories and basement; first floor and basement for stores; second floor for shops; upper floors for offices; wing to extend back from each end of front part of structure, with air court between; 33 offices with total floor space of 8000 feet on each of upper floors; four elevators; cost about \$500,000. (Recently noted.)

Md., Baltimore.—Robert Garrett & Sons have plans by Wyatt & Nolting, Keyser Bldg., Baltimore, for bank and office building at S. W. corner of South and German Sts.; 13 stories; Indiana limestone; four high-speed plunger elevators; 50x100 feet; fireproof construction; vacuum steam heat; slag and tile roof; cost \$300,000; will award contract July 1; contractors estimating are J. Henry Miller, Inc., 106-08 Dover St.; Morrow Bros., 216 W. Saratoga St.; Henry Smith & Sons, 111 S. Hanover St.; B. F. Bennett Building Co., 123 S. Howard St., all of Baltimore, and Wells Bros. Company, 160 Fifth Ave., and J. C. Robinson, Inc., 1 Madison Ave., both of New York. (Previously noted.)

Okla., Tulsa.—Simon Jankausky, 116 S. Main St., has plans for office and store building. (See "Stores.")

S. C., Cheraw.—United Building & Loan Co. will open bids about January 1 to erect bank building; two stories; cost \$10,000. (See "Machinery Wanted.")

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Tenn., Camden.—First National Bank will erect bank and office building; 22x138 feet; ordinary construction; furnace; acetylene and gasoline lighting; metal roof; cost \$6000 to \$7000; architect not employed; bids opened in about 10 days.

Tenn., Chattanooga.—Citizens' National Bank, G. N. Henson, president, purchased Kelly estate on 9th St., and is reported as planning to erect bank and office building.

Tenn., Madisonville.—A. C. Kefauver has plans by Baumann Bros., Knoxville, Tenn., for office, store and hotel building. (See "Hotels.")

Tenn., Nashville.—Mrs. Elizabeth R. Eakin will erect office building on the Boulevard.

Tex., Kenney.—Kenney State Bank will erect bank building; brick; 20x40 feet.

Va., Norfolk.—Southern Produce Co. has plans by Ferguson, Calrow & Taylor, Norfolk, for office and store building on Commercial Pl.; three stories on first floor; offices above; three stories; 40x72 feet; terra-cotta trimmings; heating plant in basement over pile and reinforced concrete foundation.

W. Va., Huntington.—First National Bank will open bids July 1 through architect, Venus T. Ritter, Ritter Bldg., Huntington, W. Va., to erect bank and office building; 60x130 feet; 12 stories; fireproof steel construction; Webster modulating steam heat; 60 square feet huxer prism sidewalks; electric elevator; Johns-Manville three-ply asphalt roofing; cost \$250,000. (Recently noted to open bids June 25.)

CHURCHES

Ala., Montgomery.—Forest Ave. Methodist Church, Rev. C. H. Webster, pastor, will erect auditorium to edifice.

Ark., Newport.—Baptist congregation plans to erect edifice; cost \$15,000. Address The Pastor, Baptist Church.

Ark., Batesville.—First Baptist Church will erect edifice. Address The Pastor, First Baptist Church.

Ga., Atlanta.—Trustees Central Baptist Church will open bids September 1 to erect edifice and Young Men's Christian Association building combined; 90x130 feet; fireproof construction; hot-air heat; electric lighting; slate roof; cost \$60,000; plans by F. W. Steinman, Beaumont, Tex.; Rev. C. A. Ridley, pastor, 52 Cooper St., may be addressed. (Recently noted.)

Ga., Louisville.—Associate Reformed Presbyterian Church, W. L. Phillips, chairman, has plans by J. Head, Candler Annex Bldg., Atlanta, Ga., for edifice; 60x75 feet; press brick; marble trimmings; steam heat; metal roof; cost \$10,000.

Ky., Louisville.—Grace Episcopal Church, 23 E. Gray St., will expend about \$10,000 for improvements to edifice, including new front wall, vestibule, etc.; plans by Fred Erhart, Norton Bldg., Louisville; practically all contracts let.

Ky., Louisville.—Crescent Hill Christian Church will erect brick addition to edifice at 117 Crescent Ave.; cost \$6000. Address The Pastor, Crescent Hill Christian Church.

Md., Baltimore.—Church of the Redeemer, Charles St. and Melrose Aves., is having plans prepared by Glidden & Friz, 16 Glenn Bldg., Baltimore, for addition to edifice; stone; one story; slate roof; hardwood interior finishings.

Md., Baltimore.—Emmanuel English Lutheran Church has plans by Alfred Cookman Leach, 323 N. Charles St., Baltimore, for edifice and will receive bids until June 29 for erection; contractors estimating are Thos. L. Jones & Son, 410 W. Saratoga St.; Piel Construction Co., 2421 Arunah Ave.; C. C. Watts, 113 W. Hamilton St.; John Cowan, Inc., 106 W. Madison St., and Consolidated Engineering Co., Bromo-Seltzer Tower Bldg., all of Baltimore.

Miss., Gulfport.—Twenty-fifth Avenue Methodist Episcopal Church has plans by Wm. Drago, New Orleans, La., for edifice; 140x80 feet; brick; seating capacity 800; cost \$25,000.

N. C., Greensboro.—Westminster Presbyterian Church, Rev. C. E. Hodgkin, pastor, will open bids about July 1 to erect edifice; 32x80 feet; pressed brick; steam heat; electric lighting; tin or slate roof; cost \$25,000; plans by Hook & Rogers, Charlotte, N. C.; proposals may be addressed to C. C. McLean. (Previously noted.)

N. C., Greensboro.—Holy Trinity Episcopal Church, Rev. Thomas G. Faulkner, rector, 400 N. Elm St., will erect edifice; seating capacity, 500; pebble dash and North Carolina granite; cost \$25,000 to \$30,000; architect not selected. (Recently noted.)

N. C., Winston.—Christian congregation has plans by George W. Kramer, No. 1 Madison Ave., New York, for edifice and Sunday-

school; seating capacity, 1200; ordinary construction; probably hot-water heat; electric lighting; cost \$30,000; probably built under supervision of committee and superintendent in sections. H. E. Moseley may be addressed. (Recently noted.)

S. C., St. Matthews.—Methodist congregation will erect edifice. Address The Pastor, Methodist Church.

Tex., Houston.—Magnolia Park Baptist Church, Rev. Charles A. Earl, pastor, will erect edifice; cost \$15,000.

W. Va., Charleston.—Bowman Methodist Church, Edgar L. Conner, secretary, 1215 Bigley Ave., will erect edifice.

CITY AND COUNTY

Ala., Anniston.—Jail.—Calhoun County Commissioners, W. F. Hanna, president, will receive bids until July 16 to erect jail; certified check for \$500, payable to W. F. Hanna; plans and specifications at office of County Commissioners, Anniston, and H. B. Wheelock, architect, Birmingham, Ala. (Previously noted.)

Ala., Birmingham.—Fire Station.—City Commissioners will erect fire station at Fairview.

Ark., Russellville.—Jail.—Pope County Commissioners of Public Buildings will receive bids until July 1 to raze and rebuild courthouse and jail. (See "Courthouses.")

Ark., Danville.—Jail.—A. B. Priddy and J. W. Lewis, Town Commissioners, will receive bids until July 6 to erect jail according to plans and specifications at office of County Clerk.

Fla., Miami.—Fire Department.—City will vote August 27 on \$5000 bond issue to equip and maintain substation and improve fire department; F. G. Erfert, acting Mayor.

Fla., Tampa.—Library.—City Library committee, O. Falk, chairman, will consider sites for proposed library.

Ga., Augusta.—Hospital.—Special correspondent wires Manufacturers Record: "City voted \$150,000 bond issue to erect hospital." Plans by G. Lloyd Preacher, Augusta. (Previously noted.)

Ga., Athens.—Fire Station.—City is having plans prepared by J. W. Barnett, City Engineer, for fireproof fire station; steam heat; cost \$10,000. (Recently noted.)

Ky., Winchester.—City Hall.—T. A. Hughes, Mayor, will receive bids until July 15 to erect city hall (above foundation) according to plans and specifications on file at office of City Engineer. (Recently noted.)

La., New Orleans.—Fire Department.—City opened bids to repair No. 23 Engine-house, on Washington Ave.; Arthur Liebe, New Orleans, is lowest bidder at \$2995. (Recently noted.)

N. C., Salem, postoffice at Winston-Salem.—Town Hall and Fire Station.—Bids received by Fred Fogel, Mayor, until June 26 to erect brick town hall and fire station; 50x70 feet; ordinary construction; electric lighting; tin roof; cost \$12,000; plans and specifications at office of W. C. Northrup, architect, Wachovia Bank & Trust Bldg., Winston-Salem.

Okla., Bartlesville.—Library.—City, Mrs. R. D. Road, secretary Library Board, has plans by B. A. Goble, Bartlesville, for Carnegie Library. (Recently noted.)

Okla., Guthrie.—Bathhouse.—Park Commission plans to erect proposed \$100,000 bathhouse.

Tex., Brownwood.—City Hall and Fire Station.—City will erect city hall and fire station. Address The Mayor.

Tex., Dallas.—Comfort Station.—City is having plans prepared by C. D. Hill & Co., Dallas, for comfort station at Fair Park; accommodations for 50 women and children; one story; concrete; 61x90 feet; cost \$10,000.

Tex., Fort Stockton.—Jail.—Pecos County Commissioners receive bids until July 15 (extended date) for alterations and additions to jail and courthouse, etc., recently noted. (See "Courthouses" and "Machinery Wanted.")

Tex., Marfa.—Jail.—Commissioners' Court of Presidio County, W. W. Bogel, County Judge, will receive correspondence from contractors to repair jail. (See "Courthouses.")

Tex., Sherman.—Fire Department.—City will vote July 25 on \$198,000 bond issue for improvements to fire department, etc. Address The Mayor. (See "Schools.")

Va., Dinwiddie.—Jail.—Dinwiddie County Commissioners plan to erect county jail; cost \$5000.

Va., Richmond.—Stables.—City will expend \$30,000 to erect stables; mill construction; electric lighting; hand elevator; slag roof;

plans by Carneal & Johnston, Richmond; contractors estimating are H. L. Matthews, J. T. Nichols, A. M. Walkup, Javi Perkins Construction Co., A. C. Houston & Co., James Fox & Son, J. T. Wilson Company, Inc., and E. C. Woodward. (Superintendent of Street Cleaning Henry Cohn recently noted to receive bids until June 28.)

W. Va., Wheeling.—Hospital.—H. F. Behrens, chairman of building committee, Neufalgine Co., will receive bids until July 6 to erect city hospital; separate bids for general contract, electrical work and plumbing; certified check for 2 per cent. amount of bid; plans and specifications at office of Charles W. Bates, architect, Board of Trade Bldg., Wheeling. (Previously noted.)

COURTHOUSES

Ark., Russellville.—Pope County Commissioners of Public Buildings will receive bids until July 1 to raze and rebuild courthouse and jail and to utilize such material as is suitable in erection of new structures; contract to include both structures with plumbing, heating and wiring; certified check for \$1000, payable to A. D. Shinn, Judge; plans and specifications at office of Clyde A. Ferrell, architect, 210½ Louisiana St., Little Rock, and Judge Shinn, Little Rock. (Recently noted.)

Tex., Fort Stockton.—Pecos County Commissioners receive bids until 9 A. M. July 15 (extended date) for alterations and additions to courthouse and jail; certified check for \$3000; plans and specifications on file with Frank Rooney, County Clerk, and office of architect, Falls City Construction Co., Louisville, Ky., and may be obtained on deposit of certified check for \$25; bids will also be received until 9 A. M. July 15 for furnishing county jail with coils and necessary steel material; plans on file in County Clerk's office; certified check for \$500. (Recently noted.)

Tex., Marfa.—Commissioners' Court of Presidio County, W. W. Bogel, County Judge, will receive correspondence from contractors relative to construction of vault in courthouse; 16 feet 6 inches by 16 feet 6 inches, 13 feet high; also to repair jail.

Tex., Miami.—Roberts county voted \$40,000 bond issue to erect courthouse. Address County Commissioners.

DWELLINGS

Ala., Birmingham.—J. S. Marks, Jr., will erect three two-story frame dwellings on S. Phelan St.; cost \$5100.

Ala., Decatur.—St. John's Episcopal Church will erect rectory; cost \$3000; W. A. Bibb and others, building committee.

D. C., Washington.—Roy W. Crampton, 622 Rock Creek Church Rd., will erect residence on Huntington St.

D. C., Washington.—J. Franklin Jameson, Bond Bldg., will erect residence on Connecticut Ave.

D. C., Washington.—R. S. R. Hitt, 1501 New Hampshire Ave. N. W., has plans by J. H. De Sibour, Hibbs Bldg., Washington, D. C., for residence on 18th St.; 4½ stories; limestone and Harvard brick; fireproof construction; steam heat; gas and electric lights; electric passenger elevator and dumb-waiter; slag roof; cost \$85,000.

D. C., Washington.—John G. Meinberg, 714 11th St. S. E., will expend \$7500 to repair dwelling at 715 12th St. S. E.

D. C., Washington.—Charles Henry Butler, 3817 11th St. N. W., purchased residence at 1630 19th St. N. W., and will remodel, erect addition for library with garage beneath.

D. C., Washington.—E. D. Hardy, 48 Rhode Island Ave. N. W., will erect residence at 2524 1st St. N. W.; cost \$6000.

D. C., Washington.—Harry A. Kite, 1333 G St. N. W., will erect dwellings at 1522 to 1546 D St. S. E.; cost \$28,000.

D. C., Washington.—Gertrude A. Lewis, 310 E St. S. W., will erect dwellings at 2613 to 2623 Hall Pl. N. W.; cost \$15,000.

D. C., Washington.—John H. Nolan, 1413 G St. N. W., will erect apartment-house at Belmont and Columbia Rds.; six stories.

D. C., Washington.—Dr. Grafton Bailey, 223 John Marshall Pl. N. W., will erect residence at 922 L St. N. W.; cost \$4000.

D. C., Washington.—Harry A. Kite, 1333 G St. N. W., has plans by A. E. Landvoigt, 1301 G St. N. W., Washington, for 13 dwellings; 40x15 feet; ordinary construction; slag roof; cost \$2500 each; construction by owner. (Recently noted.)

D. C., Washington.—H. R. Howenstein, 1314 F St. N. W., Washington, has plans by W. R. Talbot, 1314 F St. N. W., Washington, for three dwellings at 243 to 247 9th St. N. E.;

20x49 feet; eight rooms and bath; ordinary construction; metal roof; cost \$3500; construction by owner. (Recently noted.)

D. C., Washington.—William Henry McAllister has plans by Wood, Donn & Deming, 808 17th St. N. W., Washington, for residence at Wyoming Ave. and 23d St.; cost \$20,000.

D. C., Washington.—Thomas Armat, Hutchings Bldg., has plans by Wood, Donn & Deming, 808 17th St. N. W., Washington, for residence at Rock Creek Park; cost \$20,000.

Fla., Jacksonville.—George O. Holmes, 135 E. Bay St., will erect dwelling; 42x48 feet; hot-air heat; electric lighting; clay tile roof; cost \$10,000; plans by owner; will employ superintendent.

Fla., Sarasota Bay.—Mrs. Calvin S. Smith, 2382 Lake Ave., has plans by Marshall & Fox, Chicago, Ill., for dwelling; two stories and basement; 18 rooms; hollow tile and concrete; fireproof; lighting not determined; flat roof; is considering electric-light plant and refrigeration. (Recently noted to cost \$75,000.)

Ga., Atlanta.—Taylor & Tumlin will erect one-story frame dwelling on Spring St.; cost \$5000.

Ga., Atlanta.—J. B. Hart, 316 Fourth National Bank Bldg., will erect dwelling for Mrs. C. Z. Mayson; two stories; frame; cost \$5500.

Ga., Atlanta.—E. G. Black will erect one-story frame dwelling at 115 11th St. N. W.; cost \$4800.

Ga., Atlanta.—W. F. Dykes will erect one-story frame dwelling at 558 Spring St.; cost \$4000.

Ga., Atlanta.—J. T. Daniel, 211 Grant Bldg., will erect frame dwelling; two stories; slate roof; cost \$6000.

Ga., Atlanta.—Oliver & Redwine will erect one-story frame dwelling at 35 Chatham St.; cost \$3000.

Ga., Atlanta.—J. R. & C. E. Glenn will open bids about July 10 to erect dwelling; two stories; hollow wall brick and joist construction; furnace; slate roof; cost \$10,000; plans by Walker & Chase, 1331 Candler Bldg., Atlanta. (Recently noted.)

Ga., Atlanta.—William Hartsock Company will erect one-story frame dwelling at 91 Highland View Ave.; cost \$3300.

Ga., Atlanta.—C. H. Glover will erect one-story frame dwelling at 23 Fairfax St.; cost \$5000.

Ga., Atlanta.—Fittman Construction Co. will erect one-story frame dwelling at 110 Sinclair Ave.; cost \$3500.

Ga., Atlanta.—Atlanta Construction Co., 205 Austell Bldg., will erect two dwellings; two stories; frame; cost \$3000.

Ga., Atlanta.—R. H. Williamson will erect two-story frame dwelling at 419 Gordon St., cost \$4500, and one-story frame residences at 423-25-27 Gordon St., cost \$7000.

Ga., Hartwell.—Julian B. McCurry will erect dwelling at Brown Ferry and Halley Ferry Rds.

Ga., Manchester.—J. P. Corley has plans by J. Head, Candler Annex Bldg., Atlanta, Ga., for residence; two stories; frame; steam or hot-air heat; cost \$4500.

Ga., Montezuma.—T. A. Dixon will erect two-story residence on Minor Ave.; cost \$5000.

Ga., Savannah.—A. B. Rowe will erect two-story dwellings at Bolton and Harmon Sts.

Ga., Savannah.—Mrs. J. P. Wheeler will erect two-story concrete-block dwelling on Estill Ave.

Ga., Savannah.—G. J. Orr will erect two-story dwelling at Ott and Waldburg St.

Ga., Savannah.—D. C. Carson will erect residence on Henry St.

Ga., Savannah.—P. A. Waring has plans by Percy Sugden, Savannah, for dwelling; 25x62 feet; brick; metal roof; fireplaces; cost \$5000; day labor. (Recently noted under "Apartments.")

Ga., Savannah.—Mrs. Laura Register will, it is reported, erect two dwellings on Bull St. between 39th and 40th Sts.

Ga., Senoia.—J. T. Arnall has plans by J. Head for residence; two stories; frame; hot-air heat; cost \$4500.

Ga., Tybee.—Charles H. Levan, Savannah, Ga., will erect two cottages.

Ky., Earlington.—C. D. Cole of St. Bernard Milling Co. will erect residence.

Ky., Louisville.—E. S. Boswell will erect two-story brick residence at 2113 Barringer St.; cost \$6000.

Ky., Louisville.—A. C. Schuff will erect two-story brick residence at 1615 Windsor Pl.; cost \$6000.

Ky., Louisville.—Louis Keller will erect six one-story frame dwellings at 2021-27 S. 2d St.; cost \$3000 each.

Ky., Louisville.—Rosa Reinhardt will erect 2½-story brick dwelling on Edgeland St.; cost \$3500.

Ky., Louisville.—A. T. Townsley will erect dwelling at 658 38th St.; frame; cost \$3200; 26x40 feet; ordinary construction; hot-air heat; electric lighting; asphalt roof; plans and construction by owner.

La., New Orleans.—C. Smith will erect residence on Audubon St.; double; two stories; cost \$3750.

La., New Orleans.—Peter Copeland will erect four double cottages on Lowerline St.; cost \$4500.

La., New Orleans.—J. Odenwald will erect two-story frame dwelling on Canal St.; cost \$6800.

Md., Baltimore.—John P. Brandau, 709 E. North Ave., will erect several three-story brick dwellings at North Ave. and 9th St.

Mo., Kansas City.—Home Investment Co. will erect 20 dwellings in 4200 block S. Benton St.; nine of stucco, nine of stone veneer and two of brick veneer construction; total cost \$41,800.

Mo., Kansas City.—J. O. Wade will erect stucco dwelling at 6101 Brookside Blvd.; cost \$5000.

Mo., Kansas City.—A. E. Hofer will erect frame dwelling at 2120 E. 58th St.; cost \$3500.

Mo., Kansas City.—John S. Tritle has plans by H. S. Hill, New York Life Bldg., Kansas City, for residence; 30x60 feet; stucco on metal lath; hot-water heat; shingle or slate roof; cost \$2000; construction by owner. (Recently noted.)

Mo., Kansas City.—J. G. Hiatt will erect seven frame dwellings on N. Lawn St.; cost \$2300 each.

Mo., Kansas City.—W. A. Rupe will erect three frame dwellings at 1900, 1902 and 1906 Kensington St.; cost \$1600 each.

Mo., Kansas City.—Charles E. Phillips will erect two dwellings at 4909 and 4011 Virginia St.; stucco and frame; cost \$2000 each.

Mo., Kansas City.—W. R. Nelson will erect 12 frame dwellings in 4600 block Harrison St.; cost \$4000 each.

Mo., Kansas City.—A. F. Robertson will erect two stucco and one stone veneer dwelling at 2016 E. 48th St., 3528 and 3524 College St.; cost \$4500.

Mo., St. Louis.—H. C. Behle will erect three-story dwelling at 5500 Kingsbury St.; cost \$8000.

Mo., St. Louis.—A. Meyer will erect residence; 31x40 feet; ordinary construction; hot-water heat; tile roof; plans by A. Blair Riddington, 1102 Fullerton Bldg., St. Louis, who may be addressed; will probably sublet contracts. (Recently noted to cost \$10,000.)

Mo., St. Louis.—P. Ceresa will erect four one-story dwellings at 5218-36 Botanical St.; cost \$7200.

Mo., St. Louis.—Florence M. Lebreck will erect residence on Murdock Ave.

Mo., St. Louis.—Alphonse Naert will erect number of dwellings. (See "Apartment-houses.")

Mo., St. Louis.—M. Dochnal will erect store and dwelling. (See "Stores.")

Mo., St. Louis.—H. Folkers will erect two two-story dwellings at 4159-52 Hartford St.; cost \$6600.

Mo., St. Louis.—Mrs. L. Galer will erect two-story dwelling at 1727 Pennsylvania Ave.; cost \$4800.

Mo., St. Louis.—Mary L. Jones will erect two-story dwelling at 3756 Potomac St.; cost \$3000.

Mo., St. Louis.—H. A. Eichkorn will erect two-story dwelling at 3146 Keokuk St.; cost \$3000.

Mo., St. Louis.—Celestine Real Estate & Building Co. will erect two two-story dwellings at 4120-22 Flad St.; cost \$4290.

N. C., Greensboro.—L. Scott Reynolds and George W. Patterson are reported as to erect number of five and six-room residences. (See "Apartment-houses.")

S. C., Columbia.—Mrs. Britton Glass will erect residence at Laurel and Pickens Sts.; cost \$6800.

N. C., Tarboro.—Mrs. W. H. Macnair has plans by Harry B. Wagner, Rocky Mount, N. C., for dwelling; 42x56 feet; ordinary construction; fireplaces; electric lighting; shingle roof; cost \$4000; day labor.

Tenn., Memphis.—J. R. Ellis will expend \$4000 to erect residence; eight rooms; ordinary construction; slate roof; plans and construction by owner. (Recently noted to erect two dwellings.)

Tenn., Memphis.—A. J. Boots will expend \$5000 to erect dwelling; two stories; 10 rooms; mill construction; hot-water heat; tin or asbestos roof; cost \$5000; plans and construction by owner. (See "Machinery Wanted.")

Tenn., Memphis.—C. W. Ingelwright will erect residence at 1806 Galloway Ave.; cost \$3350.

Tenn., Nashville.—H. B. Alexander will erect dwelling at Louise Ave. and Elliston Pl.; brick; cost \$5000.

Tenn., Newport.—Clyde McMahan has plans by W. H. Gildard, Knoxville, Tenn., for residence; cost \$3000.

Tex., Beaumont.—C. O. Yoakum will erect \$8000 residence.

Tex., Beaumont.—C. U. Delcuc will erect residence; cost \$3000.

Tex., Dallas.—J. N. Killman has plans by Associated Architects, 513 Slaughter Bldg., Dallas, for dwelling; two stories; eight rooms; ordinary construction; frame; bids opened June 24.

Tex., Dallas.—Dr. W. L. Warren has plans by Associated Architects, 513 Slaughter Bldg., Dallas, for dwelling; nine rooms and basement; stucco on metal lath; natural-gas heating plant; cost \$3500; bids opened June 26.

Tex., Dallas.—P. B. Dunn, Jr., will erect two-story dwelling on Magnolia Ave.; cost \$3500.

Tex., El Paso.—T. R. Francis will erect residence on Montana St.; two stories; brick; cost \$6000.

Tex., Galveston.—Security Home Investment Co., L. Erickson, president, will erect 11 five and six-room bungalows.

Tex., Houston.—L. F. Hamacher will erect six-room residence on Hyde Park Blvd.; cost \$4000.

Tex., Houston.—Rev. William S. Jacobs will erect bungalow.

Tex., San Antonio.—Minnie T. Tobin has plans by Atlee B. Ayres, San Antonio, for residence; 45x59 feet; hot-air heat; electric lighting; metal roof; cost \$6000; day labor. (Recently noted.)

Va., Fort Myer.—Sterling Kerr, Jr., is having plans prepared by Milburn, Heister & Co., Union Savings Bank Bldg., Washington, D. C., for dwelling; contract will be let about July 10.

Va., Lynchburg.—J. T. and J. E. Hall will erect residence on Norfolk Ave.; frame; shingle roof; cost \$3500.

Va., Norfolk.—Abbey Land Co. opened bids to erect 20 dwellings on Eggleston Ave.; R. L. McClannan is lowest bidder at \$36,166; two stories; plans by Norman W. Sorey, Norfolk.

Va., Portsmouth.—L. B. Whitley will erect two residences. (See "Apartment-houses.")

Va., Richmond.—J. R. Hutcheson will erect detached two-story brick dwelling on 20th St.; cost \$3000.

Va., Richmond.—P. J. Bagley will erect detached two-story brick dwelling with attic on Broad St. between 35th and 36th Sts.; cost \$5000.

Va., Richmond.—W. H. Eanes will erect detached two-story brick dwelling on Short St. between Main and Cary Sts.; cost \$3250.

Va., Richmond.—A. A. Booth, care of Chesapeake & Ohio Railway Co., Richmond, will erect residence at Gunter Park; eight or nine rooms; ordinary construction; hot-water or vapor heat; slate or shingle roof; cost \$5000 to \$6000; architect not selected. (See "Machinery Wanted.")

Va., Petersburg.—John S. Jones will expend \$4800 to erect residence; 24x46 feet; ordinary construction; hot-water heat; electric lighting; slate roof; plans by S. Daley Craig, Leigh Bldg., Petersburg; no general contract. (Recently noted.)

W. Va., Parkersburg.—G. G. Quick will erect eight-room brick dwelling; lot 40x125 feet; plans not made.

GOVERNMENT AND STATE

Md., Frostburg.—Postoffice.—Treasury Department, James Knox Taylor, supervising architect, Washington, D. C., will erect proposed postoffice building; one story and basement; 55x56 feet; 40 feet high; heating plant, etc., in basement; cost \$40,000.

N. C., Charlotte.—Postoffice.—Treasury Department, Office of Supervising Architect, James Knox Taylor, Washington, D. C. Sealed proposals received in this office until August 3 for construction (including plumbing, heating apparatus, gaspiping, electric conduits and wiring, and interior lighting fixtures) of extension, remodeling, etc., of United States postoffice and courthouse at

Charlotte, N. C.; two stories and basement; stone faced; fireproof construction (except roof); ground area, 12,600 square feet; drawings and specifications obtainable from custodian of site at Charlotte or at this office, at discretion of supervising architect. (Previously noted to advertise for bids June 21.)

Va., Catawba Sanatorium.—Sanatorium.—State Board of Health is having plans prepared by C. M. Robinson, Richmond, Va., for pavilion to accommodate 40 beds; will also enlarge office building and install heating plant in old hotel building. (Recently noted.)

Va., Lynchburg.—Home.—State is having plans prepared by W. R. Burnham, Lynchburg, for building at State Epileptic Colony to accommodate 50 feeble-minded women; cost \$15,000.

HOTELS

Ark., Okolona.—Nelmeyer Milling Co. will erect hotel, etc. (See "Lumber Manufacturing.")

D. C., Washington.—Charles Jacobson is having plans prepared by Appleton P. Clark, Jr., 816 11th St. N. W., Washington, for improvements to Johnson Hotel; cost about \$50,000; steam heat; electric lighting; electric elevator; date of opening bids not decided.

Ga., Atlanta.—Special correspondent wires Manufacturers Record: "William F. Wine-coff and associates are reported as consulting W. L. Stoddart, 30 W. 38th St., New York, preparatory to erection of 12-story hotel at Peachtree and Ellis Sts." (Peachtree Hotel Co. previously reported as to erect hotel at Peachtree and Ellis Sts.)

Ky., Cloverport.—Robert T. Exshaw will erect hotel at 1st and High Sts.; 15 bedrooms, sitting-room, sample-room, lobby, two baths, laundry, etc.; electric lights.

N. C., Wilson.—Wilson Hotel Co. has plans by Benton & Moore, Wilson, for hotel; ordinary construction; steam heat; electric lighting; electric automatic elevator; asbestos roof; cost \$45,000. Address J. C. Hales for further information.

N. C., Hendersonville.—Laurel Park Street Railway is reported as interested in erection of hotel; cost \$25,000.

Tenn., Madisonville.—A. C. Kefauver will expend \$10,000 to erect hotel, store and office building recently noted; 50x150 feet; ordinary construction; steam heat; electric or gasoline lighting; three-way prism sidewalk lights; gravel roof; plans by Baumann Bros., Knoxville, Tenn.; day labor. (See "Machinery Wanted.")

Tex., Mexia.—Hickman estate contemplates replacing buildings recently reported burned with 20-room hotel; cost \$30,000.

Tenn., Newport.—W. C. Terry, Knoxville, Tenn., and others have plans by W. H. Gildard, Knoxville, Tenn., for hotel; 65x55 feet; mill construction; gravel roof; cost \$10,000; cost of heating and lighting, \$6000; contracts sublet. (Recently noted.)

Va., Ocean View.—Norfolk & Portsmouth Traction Co., E. C. Hathaway, general manager, Norfolk, Va., will, it is reported, erect brick hotel, bathhouses to replace present structures, and raise present hotel to provide lawn; cost of improvements, \$150,000.

Va., Richmond.—Marcus Hallett, Richmond, and Greenville Temple Snelling, 114 E. 28th St., New York, are reported as preparing plans for hotel on 5th St., between Main and Franklin Sts.; 60x115 feet; white-glazed terra-cotta front; white brick sides; 10 stories and basement; cost \$25,000 to \$250,000; Mr. Hallett is reported as organizing company to erect structure.

Va., Richmond.—William Reuger is having plans prepared by Charles M. Robinson, Richmond, for hotel at 9th and Bank Sts.; 10 stories. (Previously noted.)

W. Va., Moundsville.—Hotel committee of Board of Trade, including Thomas Scott and others, has option on Clendenning Hotel property; plans to expend \$10,000 to remodel, install steam heat, running water and private baths.

MISCELLANEOUS

D. C., Washington.—Car Barn.—Washington & Great Falls Railway & Power Co. plans to erect car barn, etc. (See "Electrical Plants.")

Ga., Savannah.—Alliance.—Jewish Educational Alliance incorporated by Sigo Myers, Rev. George Solomon and others; purchased site at 208-10 Oglethorpe Ave. and will, it is reported, erect building.

Ky., Louisville.—Home.—Sisters of Good Shepherd will erect home at Newburg Rd. and Ropewalk La.

Ky., Pawce Valley.—Home.—Confederate

Home will expend \$4300 to erect small boiler house, heating plant and hospital cottage annex; brick and frame; steam heat; plans by John Bacon Hutchings, Louisville, Ky. (Recently noted to receive bids until June 20.)

Mo., St. Louis.—Restaurant.—John R. Thompson will erect brick restaurant at 100 Main St.; cost \$53,000.

N. C., Dunn.—Stable.—J. H. Ballance will erect sales and livery stable; brick; site 100x140 feet.

N. C., Fayetteville.—Hospital.—Benton & Moore, Wilson, N. C., are preparing plans for four-story hospital.

S. C., Camden.—Hospital.—W. J. Burdell is interested in erection of hospital; fireproof construction; steam heat; electric lighting; slate roof; cost \$30,000; plans not determined. (Chamber of Commerce previously noted interested.)

Tex., Pecos.—Fair.—Trans-Pecos Fair Association will open bids about July 20 to erect grandstand and auditorium; electric lighting; cost \$3800. (Recently noted to organize with \$6000 capital stock.)

Va., Richmond.—Home.—Trustees of Baptist Home for Aged Women are having plans prepared by Carneal & Johnston, Richmond, for building; cost \$30,000 to \$40,000.

W. Va., Charleston.—Stable.—Ruffner Bros. will erect stable and garage. (See "Motors and Garages.")

RAILWAY STATIONS

Ala., New Decatur.—Louisville & Nashville Railroad, W. H. Courtenay, chief engineer, Louisville, Ky., will, it is reported, erect passenger depot; cost \$10,000.

Ga., Hawkinsville.—Gulf Line Railway, H. A. Bumann, chief engineer, Sylvester, Ga., is reported as to erect passenger station; brick.

Md., Baltimore.—Maryland & Pennsylvania Railroad, J. S. Norris, general manager, North Ave. and Oak St., contemplates erection of passenger station to replace present structure; is having plans prepared by Wyatt & Nolting, Keyser Bldg., Baltimore; further details not ready for publication.

Tenn., Memphis.—Illinois Central Railroad, A. S. Baldwin, chief engineer, Chicago, Ill., will erect union depot at Main St. and Calhoun Ave.; reinforced concrete and steel; bottom of front of stone, with massive pillars sunk into building and extending up several stories; elevated tracks, etc.; total cost of depot and terminals \$2,000,000 to \$3,000,000. (Previously noted.)

Tex., Dallas.—Union Terminal Co., organized with F. G. Pettibone, president, Galveston, Tex., and others, will erect 1½ or 2-story union passenger station, shops, roundhouses, etc. (See "Railway Shops, Terminals," etc.)

Tex., Justin.—Gulf, Colorado & Santa Fe Railway, F. E. Merritt, chief engineer, Galveston, Tex., will erect depot. (See Tex. Krum.)

Tex., Krum.—Gulf, Colorado & Santa Fe Railway, F. E. Merritt, chief engineer, Galveston, Tex., will, it is reported, erect No. 7 modified depot at Krum to cost \$350, No. 7 modified depot at Justin, Tex., to cost \$300; standard No. 1 depot at Black to cost \$150; modified depot No. 7 at Valley View to cost \$400; rearrange track and erect combination depot at Kileen, Tex., to cost \$650.

Tex., Texarkana.—Kansas City Southern Railway, E. C. Johnston, chief engineer, Kansas City, Mo., will, it is reported, erect passenger station; cost \$125,000 to \$150,000.

Tex., Valley View.—Gulf, Colorado & Santa Fe Railway, F. E. Merritt, chief engineer, Galveston, Tex., will erect depot. (See Tex. Krum.)

SCHOOLS

Ala., Livingston.—City is having plans prepared by C. F. Tye, Gadsden, Ala., for proposed school; cost \$20,000.

Ark., Conway.—Trustees of Hendrix College will erect dormitory to cost \$50,000; construct septic tank and install sewer system.

Ark., Mulberry.—School Board will erect annex to school; 60x70 feet; two rooms and auditorium.

Ark., Womble.—School Board, J. O. Womble, secretary, will receive bids until June 20 to erect school; board to furnish all materials; two stories; brick; bids for entire work or separate bids for brick and wood work; plans and specifications at office of T. M. Snaders, architect, Southern Trust Bldg., Little Rock, Ark.

Fla., Sebastian.—St. Lucie County School Board, B. F. Hardesty, chairman, Fort Pierce, Fla., will receive bids until July 2

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to erect two-room addition to school; plans and specifications at office of J. W. Hodge, superintendent, Fort Pierce, Fla.

Ga., Pendergrass.—P. J. Roberts will open bids July 1 to erect Pendergrass High School; 80x50 feet; two stories; brick; heat- ing, lighting, etc. not let; cost \$6000; plans by Sary & Baulder.

Ga., Cordele.—City voted \$25,000 bond issue to erect school, etc.; W. H. Dorris, Mayor. (See "Water-works.")

Fla., Pensacola.—Escambia County Board of Public Instruction rejected all bids to erect negro school No. 3 on West Jackson St. (Recently noted.)

Ky., Jenkins.—Consolidation Coal Co., general offices Continental Bldg., Baltimore, will erect school building; cost \$25,000; George D. Watson, in charge of operations, Fairmont, W. Va., can probably furnish information.

Ky., Paint Lick.—City is having plans prepared for graded school. Address The Mayor.

La., New Orleans.—City opened bids to erect boys' high school on Canal St.; Geo. J. Glover, New Orleans, is lowest bidder at \$16,783 and \$299,072; first bid to include manual training department; second without manual training department. (Recently noted.)

La., Opelousas.—First School District of First Ward of St. Landry parish voted tax to provide \$65,000 to erect school. Address School Trustees.

Md., Baltimore.—Board of Awards, John Hubert, president pro tem., will receive bids at office of Richard Gwinn, City Register, City Hall, until July 3 to erect addition to No. 13 school at Patterson Park Ave. and McElderry St.; certified check for \$500, payable to Mayor and City Council; plans and specifications at office of Clarence E. Stubbs, Inspector of Buildings, City Hall. (Recently noted.)

Md., Frederick.—County Commissioners will issue \$75,000 of bonds for proposed school improvements, including remodeling East Church St. and North Market St. schools.

Md., Frederick.—Frederick County Commissioners purchased site in southern part of city to erect proposed school.

Md., Frostburg.—Charles M. Anderson, 321 N. Charles St., Baltimore, Md., is preparing plans for improvements to State Normal School No. 2, to include erection of gymnasium and two classrooms, and installation of plumbing and heating in present structure; has \$25,000 appropriation.

Miss., Meridian.—Father Ten Brink and St. Patrick's congregation will erect school building at Davis St. and Twenty-sixth Ave.

Miss., University.—Sealed proposals to erect building and proposals for heating, plumbing and wiring for Educational Building received until July 27; two stories and basement; cost \$40,000; plans to be had from office of Ben Price, 518-19 Empire Bldg., Birmingham, Ala., on and after June 29; deposit of \$15 required for plans; certified check for \$300 to accompany building proposal; certified checks for \$75 each with proposals on heating, plumbing and wiring. Address O. F. Lawrence, secretary Board of Trustees.

Miss., Pheba.—City contemplates issuing \$600 of bonds to erect dormitory for agricultural high school of Clay county. Address The Mayor.

Mo., Carthage.—City voted \$10,000 bond issue to erect school at Kendricktown. Address The Mayor. (Previously noted.)

Mo., Herculaneum.—School Board, L. H. Jones, secretary, will expend \$13,000 to erect school building; 63x77 feet; ordinary construction; low-pressure system of heating; electric lighting; gravel and pitch roof; plans by H. H. Hohenschild, 311 Navarre Bldg., St. Louis. (Recently noted to receive bids until June 27.)

Mo., Independence.—Independence School District voted \$75,000 bond issue to erect three schools. Address District School Trustees. (Previously noted.)

Mo., Maplewood.—Board of Managers of Catholic Theological Seminary of St. Louis, Rev. P. W. Hallon, president, pastor of Visitation Church, St. Louis, Mo., will erect Catholic seminary on Drummond property near Maplewood; accommodations for about 250 students; cost \$500,000.

N. C., Asheville.—City will vote November 5 on \$50,000 bond issue for school improvements. Address School Board.

N. C., Dunn.—School Board is having plans prepared by Benton & Moore, Wilson, N. C., to remodel graded school building; ordinary construction; metal roof; steam heat; plans on file after July 1. (Previously noted.)

N. C., Wilson.—City voted bond issue to erect \$30,000 school. Address The Mayor. (Recently noted.)

Okla., Lawton.—State Board of Agriculture will erect girls' dormitory at Cameron State School of Agriculture; cost \$5000.

Okla., McAlester.—City will vote July 2 on \$60,000 bond issue to erect and equip three four-room schools in Second, Fourth and Sixth Wards and Colored High School; also equip buildings in First, Third and Fifth Wards; B. A. Enloe, Jr., Mayor. (Recently noted.)

S. C., Charleston.—City will repair and improve Crafts, Courtenay, Simonton and Shaw schools at cost of \$3000 each, and Colored Industrial School at cost of \$2500. Address The Mayor.

S. C., Hendersonville.—Hendersonville High School, Professor Farrow, principal, will erect dormitory.

Tenn., Chattanooga.—Hamilton County Board of Education, J. B. Brown, Superintendent of County Schools, will receive bids until July 2 to erect four frame school buildings for colored children in Hill City, Brown's Chapel, Mt. Taber and Roberts Mill; certified check for \$100, payable to J. A. Hargraves, chairman of board, with bid each building; plans and specifications at office of Adams & Alsop, architects, James Bldg., Chattanooga. (Recently noted.)

Tenn., Dickson.—Bids will be received until June 29 to furnish materials and complete several branches of work on two-story nine-room brick school; plans and specifications at office of Recorder, Dickson, and R. E. Turbeville, architect, 411-12 Union Bank Bldg., Nashville, Tenn., and Nashville (Tenn.) Builders' Exchange. (Recently noted.)

Tenn., Hill City.—Hamilton County Board of Education, J. B. Brown, Superintendent of County Schools, Chattanooga, Tenn., will receive bids until July 2 to erect school. (See Tenn., Chattanooga.)

Tenn., Madisonville.—Board of Education, S. J. Parks, secretary, has plans by Baumann Bros., Knoxville, Tenn., to erect addition to county high school; 49x35 feet; also connecting corridor; ordinary construction; steam heat; electric lighting; gravel roof.

Tenn., Tellico Plains.—City, N. M. McDonald, secretary School Board, has plans by Huntington & Sears, James Bldg., Chattanooga, Tenn., for school; six rooms and auditorium; frame; low pressure steam heat; shingle roof. (Baumann Bros. of Knoxville, Tenn., recently noted as preparing plans.)

Tenn., Orchard Knob (not a postoffice).—Board of Education of Hamilton county, Chattanooga, Tenn., J. B. Brown, superintendent of county schools, will receive bids until July 2 to erect brick school; certified check for \$300, payable to J. A. Hargraves, chairman of board; plans and specifications at office of R. H. Hunt, architect, 1225 James Bldg., Chattanooga, Tenn. (Recently noted.)

Tenn., Rogersville.—Swift Memorial College has plans by W. H. Gildard, Knoxville, Tenn., for building to contain chapel, classrooms, dormitory and dining-rooms; brick.

Tenn., Shelbyville.—Turner Normal College, in charge of Dr. J. A. Jones, will erect proposed dormitory; pressed brick and cut stone; 158x52 feet.

Tex., Alanreed.—Trustees of School District No. 7, Gray county, will erect school; cost \$8500.

Tex., Bryan.—Allen Academy has plans by Harvey-Page Company, San Antonio, Tex., for workshop and dormitory; workshop in basement; second and third floors as dormitories to accommodate 74 boys; cost \$20,000. (Recently noted.)

Tex., Cross Plains.—City will open bids July 1 to erect school; cost \$10,000. Address The Mayor. (Bond issue recently noted voted.)

Tex., Goliad.—Goliad Independent School District voted \$20,000 bond issue to enlarge school. Address District School Trustees. (Recently noted.)

Tex., Houston.—Dann C. Smith, Jr., City Comptroller and City Clerk, will receive bids until July 29 to erect Sixth Ward School at Kane and Silver Sts.; certified check for 5 per cent. amount of bid, payable to H. B. Rice, Mayor; plans, specifications and bidding blanks at office of C. H. Page & Bro., architects, 717 Union National Bank Bldg., Houston. (Previously noted.)

Tex., Houston Heights.—O. P. Woodburn, president of the School Board, will receive bids until July 5 to erect two-story-and-basement annex to Harvard School; work let in four separate contracts, as follows: general work; plumbing, sewerage and gas fitting; steam fitting; cement walks and

shell drives; certified check for 5 per cent. amount of bid with general contract proposals and for 10 per cent. amount of bid with other proposals, payable to O. P. Woodburn as above; plans and specifications at office of Mr. Woodburn, D. Barker, Mayor, Klam Bldg., Houston, Tex., and of Ollie J. Lohren, architect, Houston, Tex.

Tex., Lavon.—School trustees will open bids at once to erect school building; 80x100 feet; brick; tile roof; cost \$9000; plans by Waller & Fields, Fort Worth, Tex. (Bond issue of \$9000 recently noted voted.)

Tex., Lytton Springs.—School Board, J. H. Compton, president, will receive bids until June 27 to erect two-story brick high school; certified check for \$150; plans and specifications at office of Mr. Compton at Lytton Springs, and R. L. Pierce, architect, San Antonio, Tex.

Tex., San Augustine.—City voted \$10,000 bond issue to erect addition to school building and provide agricultural department in connection. Address The Mayor.

Tex., Sherman.—City will vote July 25 on \$198,000 bond issue to erect schools, improve fire department, extend sewer and water systems and paving. Address The Mayor. (Recently noted.)

Tex., Sherman.—Austin College, Dr. T. S. Clyce, president, will rebuild main building of college; cost \$30,000.

Tex., Temple.—Company will incorporate to erect training school for boys; 60x120 feet; two stories; brick; tin roof; cost \$15,000; name not adopted; architect not selected. (Chamber of Commerce recently noted to finance company with \$20,000 capital stock.)

Va., Chesterfield.—Clover Hill School District will erect school near Bethel Church; accommodations for 100 pupils; W. L. Robertson, T. C. Crump and Dr. L. A. Sims, members of District School Board.

Va., Hampton.—Elizabeth City county awarded contract to C. L. Summers (recently noted as lowest bidder), Hampton, to erect addition to George Wythe School, near Salter's Creek; 36x75 feet; ordinary construction; steam heat; electric lighting; gravel roof; plans by C. T. Holtzclaw, Merchants' National Bank Bldg., Hampton.

Va., University.—University of Virginia, W. A. Lambeth, superintendent, will erect building for department of education; ordinary construction; steam heat; electric lighting; slate roof; cost \$40,000. (Recently noted.)

Va., Norfolk.—Tanners Creek District School Board of Norfolk county will receive bids at office of A. H. Foreman, division superintendent, 57 Chamberlaine Bldg., Norfolk, until July 1 to erect two-story four-classroom brick school in Larchmont; certified check for \$350, payable to B. F. Cartwright, clerk of board; drawings and specifications at office of Lee & Diehl, architects, 408 Seaboard Bank Bldg., Norfolk, or may be had on deposit of \$25.

W. Va., Glendale.—Board of Education, Moundsville, W. Va., ordered election for July 2 to vote on \$15,000 bond issue to add four additional rooms and install ventilating and heating systems at Glendale school and to erect school at Fairview.

W. Va., Welch.—School Board of Brown Creek District contemplates voting in fall on \$40,000 bond issue to erect high school building; will only erect east wing at present; 30x75 feet; fireproof construction; electric lighting; reinforced concrete stairway; cast-iron balustrades, reinforced tile floors and terra-cotta cornice; cost \$10,000; plans by Waller Jefferson Smith, Bramwell, W. Va. (Postponed date of opening bids from June 17, as recently stated.)

W. Va., Falling Spring.—Falling Spring School District will vote June 29 on \$20,000 bond issue for school improvements; R. J. Walkup, president of Board of Education.

STORES

Ala., Attalla.—E. D. Pettit will expend \$7000 to \$8000 to erect store building; 50x100 feet; brick; concrete floors; metal ceiling; composition roof; J. M. Flood of Attalla probable contractor. (Contract recently noted let at Gadsden, Ala.)

Ala., Birmingham.—H. J. Porter, Jr., will erect two-story frame building at Madison Ave. and 26th St. South; cost \$6000.

Ark., Hartford.—A. S. Johnson and David More will expend \$3500 to erect store building; 50x70 feet; ordinary construction; electric lighting; concrete sidewalks; composition roof; plans and construction by Mr. Johnson. (Contract recently noted awarded.)

Ala., Ragland.—McNeill Bros. will erect business building on Church St.; two stories; brick.

D. C., Washington.—Mary Velati, 610 14th St. N. W., will expend \$18,000 to remodel store at 618-22 9th St. N. W.

D. C., Washington.—E. B. Johnson, 632 Lamont St. N. W., purchased building at 918 E St. N. W. and will remodel for business purposes.

Fla., Auburndale.—R. E. Thomas will erect store and office building; plans by H. Leslie Scott, Lakeland, Fla. (See "Bank and Office Buildings.")

Fla., Jacksonville.—Duval Realty Co. will erect two-story brick and stone building on Oak St. between Margaret and Goodwin Sts.

Fla., Miami.—William Burdine & Son will erect reinforced concrete building; five stories and basement; elevator and electric plant complete; basement and first floor to be used as department store; upper floors, offices. (Recently noted.)

Fla., Micanopy.—A. B. Chitty will rebuild store recently burned; 34x80 feet; brick; cement floor; lighting not decided; metal or asphalt roof; cost \$3000 to \$4000; John D. Reeves, probable contractor.

Fla., Orlando.—E. Hand and associates are having plans prepared by Francis J. Kennedy, Tampa, Fla., for business block; 180x30 feet; ordinary construction; date of opening bids not determined. (Recently noted.)

Fla., Palmetto.—J. A. Lamb will receive bids until July 2 to erect two-story brick store and office building; 90x65 feet.

Ga., Americus.—J. F. and J. S. Bolton purchased site at Cotton Ave. and Wheeler St. and will erect store buildings.

Ga., Atlanta.—Dr. J. W. Roberts will erect stores at 455 Peachtree St.; site 52x140 feet.

Ga., Atlanta.—Benmont Davison will erect two-story brick-veneer building at 1115 Ponce de Leon Ave.; cost \$25,000.

Ga., Savannah.—George M. Gadsden will erect building on lots Nos. 36, 37, 38, 39 and 100, Johnson Ward.

Ga., Savannah.—B. T. Adams will erect two-story brick store; 28x128 feet; cost \$10,000; will also erect two store and office buildings; 28x128 feet; two stories; brick.

Ga., Savannah.—Grand United Order of Odd Fellows has plans by J. De Bruyn Kops, Savannah, for lodge and store building. (See "Association and Fraternal.")

Ky., Louisville.—H. H. Snyder Company contemplates erecting business building.

Ky., Louisville.—Louis Seelbach, Frank Fehr and others will erect business block.

Ky., Louisville.—John P. Starks, 318 Paul Jones Bldg., will receive bids until July 2 to erect store and office building. (See "Bank and Office.")

Miss., Laurel.—A. Marcus will erect two-story brick business building.

Mo., Joplin.—W. H. Landreth has plans by Garstang & Rea, Joplin, for business building to be occupied by Landreth Machinery Co. as sales rooms; 50x90 feet; two stories; brick and reinforced concrete; heating not decided; gravel roof; cost \$10,000; bids opened June 26. (Recently noted.)

Mo., St. Louis.—A. Kern will erect two-story store at 2126 College St.; cost \$6000.

Mo., St. Louis.—J. T. Grayson will erect two-story store at 2301 Bernays St.; cost \$5000.

Mo., St. Louis.—M. Dochnal will erect two-story store and dwelling at 6301-31-A Gravois St.; cost \$4000.

N. C., Dunn.—Pope & Maynard will erect two store buildings.

N. C., Greensboro.—L. Scott Reynolds and George W. Patterson are reported as to erect apartment and store building.

N. C., Raleigh.—B. F. Montague is having plans prepared by J. M. Kennedy, Raleigh, for block of six stores; 115x75 feet; two stories and full basement with concrete floors and sills; red brick; stone trimmings; mission style; vault lights in front and open area in rear.

Okla., Tulsa.—Simon Jankausky (not Pankowsky as recently stated), 116 S. Main St., has plans by Winkler & McDonald for store and office building; reinforced concrete; steam heat; prism sidewalk lights; call for bids will be advertised.

S. C., Charleston.—James F. Condon will erect store at 433 King St.; cost \$2300.

S. C., Darlington.—W. D. Coggeshall will erect store; two stories; cost \$15,000. (See "Machinery Wanted.")

S. C., Rock Hill.—Dr. T. A. Crawford is having plans prepared by J. S. Starr, Rock Hill, for business building on E. Main St.; two stories; 40x100 feet; pressed brick; stone trimmings; plate-glass front with prism lights; upper floor reached by outside stairway.

Tenn., Camden.—W. L. Morris will erect business building.

Tenn., Chattanooga.—Lookout Temple Co. will erect business and lodge building. (See "Association and Fraternal.")

Tenn., London.—Greer & Carmichael have plans by W. H. Gildard, Knoxville, Tenn., for store; 27x100 feet; hot-air furnace; gravel roof; contracts sublet; cost \$4000.

Tenn., Madisonville.—A. C. Kefauver will expend \$10,000 to erect store, hotel and office building recently noted; day labor. (See "Hotels.")

Tenn., Memphis.—W. W. Watkins, Aberdeen, Miss., is having plans prepared by H. C. Alsop, Memphis, for two store buildings on Main St.; three stories; brick; cost \$50,000.

Tenn., Nashville.—O. F. Noel will erect store at Fifth Ave. and Denderick St.; brick; two stories; cost \$11,000.

Tex., Brenham.—Winkelman Bohn will make improvements to building at Main and North Sts., including iron front with double plate-glass doors, etc.; is having plans prepared by C. H. Page & Bro., Austin, Tex.

Tex., Dallas.—C. C. Slaughter has plans by J. W. Rowe, Dallas, for business building at Elm and Stone Sts.; two stories; brick; cost \$22,000.

Tex., Dallas.—W. A. Green & Co. are having plans prepared by Lang & Wittich, Dallas, Tex., for rebuilding Oram Building at 1516 E. Elm St.; five stories and basement; will use present walls.

Tex., Hillsboro.—Ancient Free and Accepted Masons will erect business and lodge building. (See "Association and Fraternal.")

Tex., Houston.—E. A. Hudson will erect store at Milam and Rusk Sts.; fireproof; automatic sprinkler system; 100x100 feet; cost \$50,000.

Tex., San Antonio.—Frank Castiglione will erect store building on N. Salado St.; cost \$500.

Tex., San Antonio.—Mrs. L. B. Moore will erect store building on Ave. D; cost \$8500.

Va., Norfolk.—Southern Produce Co. has plans for store and office building. (See "Bank and Office.")

Va., Norfolk.—Granby Street Corporation opened bids to erect four stores on Granby St. near 12th St.; J. H. Pierce, Norfolk, is lowest bidder at \$10,776.

Va., Richmond.—S. G. Meredith will erect store and apartment building. (See "Apartment-houses.")

Va., Richmond.—Ed Whitlock and Byron Bear will erect tenement and store building. (See "Apartment-houses.")

W. Va., Beckley.—Beckley Fraternal Association will erect store and lodge building. (See "Association and Fraternal.")

W. Va., Fayetteville.—C. M. Watson will erect business building on Person St.; brick; glass front; two stories.

THEATERS

S. C., Spartanburg.—Grand Theater incorporated with \$15,000 capital stock; L. T. Lester, Jr., president, secretary and treasurer; C. C. Wyche, vice-president; will establish moving-picture theater.

WAREHOUSES

Fla., Pensacola.—Gulf Refining Co. (offices at Port Arthur, Tex., and Pittsburgh, Pa.) will erect warehouses, etc. (See "Miscellaneous Factories.")

Ga., Macon.—J. F. Heard, B. B. Ford, Snowden & Goode, Georgia Warehouse Co. and R. C. Hazlehurst will erect warehouse; six compartments; capacity for 1000 bales of cotton; brick or concrete; tile roof; cement floor; automatic sprinkler system. (Recently noted.)

Ga., Moultrie.—J. W. Coleman will erect warehouse; 180x300 feet; over 50,000 square feet floor space; cost \$12,000.

Ky., Maysville.—Farmers & Shippers Tobacco Warehouse Co., Cincinnati, O., will erect warehouse; 100x400 feet.

Mo., Kansas City.—James Flanagan of Security Storage Co. will erect warehouse for Montgomery Ward & Co. on St. Louis Ave.; 7 stories; fireproof; 120,000 square feet floor space.

N. C., Greensboro.—Greensboro Tobacco Warehouse Co. organized with \$15,000 capital stock by W. S. Clary, C. H. McKnight, R. G. Vaughn and others; will erect tobacco warehouse at East Sycamore and Forbes Sts.; 80x170 feet; brick; metal roof; cost \$10,000; plans by G. W. Armfield, Greensboro; date of opening bids not set.

S. C., Darlington.—W. D. Coggeshall will erect two warehouses.

Tex., Dallas.—H. J. Toole has plans by Associated Architects, 513 Slaughter Bldg., Dallas, for warehouse; 40x100 feet; two stories; ordinary construction; brick; electric

freight elevator, two-ton capacity, 6x6 feet; composition roof; bids opened June 20.

Va., Suffolk.—Holmes & Dawson will erect storage warehouse; brick.

BUILDING CONTRACTS AWARDED

APARTMENT-HOUSES

D. C., Washington.—American Security & Trust Co. awarded contract to Davis Construction Co., Union Trust Bldg., Washington, for flats and garage. (See "Motors and Garages.")

Fla., Jacksonville.—J. C. Darby awarded contract to F. A. Applegate, Jacksonville, to erect apartment-house; 62x97 feet; frame; fireplaces; gas and electric lighting; metal-shingle roof; cost \$15,000; plans by McClure & Holmes, Jacksonville. (Recently noted.)

S. C., Columbia.—Richard C. Keenan awarded contract to John J. Cain Construction Co., Columbia, to erect apartment-house and two stores at Main St. and Elmwood Ave.; three stories; 53x208 feet; cost \$50,000; plans by J. B. Urquhart, Columbia.

Tex., El Paso.—Sabino Urrutia awarded contract to James C. White Realty Co. to erect tenement-house at Cotton Ave. and Third St.; brick; 14 rooms; cost \$3150.

Tex., El Paso.—Broadus & Davis awarded contract to King Worley, El Paso, to erect apartment-house at Octavia St. and Boulevard; four apartments and store; cost \$12,000.

ASSOCIATION AND FRATERNAL

Tex., Leander.—Woodmen of the World awarded contract to S. Burland, Austin, Tex., to erect proposed lodge building; cost \$4300; plans by Roy L. Thomas, Scarborough Bldg., Austin, Tex.

BANK AND OFFICE

D. C., Washington.—Milburn, Heister & Co., architects, Union Savings Bank Bldg., Washington, awarded contract to P. F. Gormley, Union Trust Bldg., Washington, to erect office and store building for R. P. Andrews Paper Co.; recently noted. (See "Stores.")

D. C., Washington.—Potomac Electric Power Co. awarded contract at \$55,980 to James L. Parsons, Pennsylvania Ave. and 13th St., Washington, to erect office building at 14th and C Sts. N. W.; stone and brick exterior; reinforced concrete interior; plans by Milburn, Heister & Co., Union Savings Bank Bldg., Washington. (Previously noted.)

Fla., Umatilla.—Bank of Umatilla has plans by and awarded contract to W. H. Carr, Eustis, Fla., to erect 20x50-foot bank building; fireproof construction; tin roof. (Recently noted.)

Fla., Titusville.—Bank of Titusville awarded contract to erect bank building; two stories; brick and reinforced concrete; 20x50 feet. (Previously noted.)

Ga., Savannah.—Chatham Bank awarded contract to Charles McCaul Company, 10th and Sanson Sts., Philadelphia, Pa., to erect bank and office building; 60x90 feet; one story and mezzanine; fireproof; white marble face; steam heat; cost \$50,000; also awarded contract to Herring-Hall-Marvin Safe Co., 400 Broadway, New York, for vault work; plans by Mowbray & Uffinger, 56 Liberty St., New York; George C. Ransom, supervising architect. (Previously noted.)

Ky., Louisville.—Great Southern Fire Insurance Realty Co. awarded contract, it is reported, to H. H. Snyder Company, Louisville, for reinforced concrete frame for office building at 5th and Walnut Sts.; 11 stories; 50x150 feet; fireproof; cost about \$250,000; plans by Joseph & Joseph, Louisville; is receiving bids for heating plant and three electric elevators. (Recently noted.)

Mo., St. Louis.—Nicholas Pelligreen awarded contract to erect office and store building recently noted. (See "Stores.")

Mo., St. Louis.—J. M. Carpenter Realty Co. awarded contract to erect mercantile and office building. (See "Stores.")

N. C., Oak City.—Bank of Oak City awarded contract to erect bank building.

Tex., Corpus Christi.—First State Bank awarded contract to W. D. Collins Safe Co., 511 Main St., Denison, Tex., for interior room alterations, including marble and bronze fixtures, bronze rails and terrazzo floors.

Tex., Memphis.—Hall County National Bank awarded contract to W. D. Collins Safe Co., 511 Main St., Denison, Tex., for inside trimmings, wainscoting and steel vault doors; plans by R. S. Stucky.

Va., Norfolk.—Merchants and Farmers'

Bank awarded contract to Edward Overman, Norfolk, to erect addition to bank building; cost \$6100.

CHURCHES

Ark., Little Rock.—Capitol View Methodist Church awarded contract to W. J. Cotton to erect edifice; 140x54 feet; fireproof construction; steam heat; electric lighting; asbestos roofing; cost \$80,000; plans by R. P. Morrison, Little Rock; materials purchased and all contracts let. (Recently noted.)

Fla., Tampa.—Palm Ave. Baptist Church awarded contract at \$11,250 to J. Q. Dickinson, Tampa, to complete edifice; 55x57 feet; part already constructed, 37x57 feet; brick; gas heat; gas and electric lighting; slate roof; shell only to be completed at this time; interior to be completed later at cost of \$10,000; W. W. Fineran, consulting engineer, Tampa; heating and lighting contract separate. (Recently noted.)

Ga., Savannah.—Mt. Zion Baptist Church, Rev. McD. Spencer, pastor, 522 W. Duffy St., awarded contract to W. B. Brown, 509 W. Broad St., Savannah, to erect edifice recently noted; 22x65 feet; mill construction; brick; electric lighting; metal shingle and tin roofing; cost \$10,000. (See "Machinery Wanted.")

N. C., Lexington.—First Reformed Church awarded contract to J. W. Tussey, Lexington, for woodwork, and to T. S. Eanes, Lexington, for brick, stone and concrete work on residence on Center St.; hot-air heat; electric lights; slate roof; cost \$9000. (Previously noted.)

Tex., El Paso.—First Congregational Church awarded contract to L. F. Clark, El Paso, to erect edifice; two wings connected by pergola; cost \$5000; plans by Randolph Berry, El Paso. (Recently noted.)

Va., Norfolk.—Park View Christian Church awarded contract to Edward Overman, Norfolk, to erect edifice; brick; slate roof; cost \$7100.

DWELLINGS

Ark., Little Rock.—Theodore Treadway awarded contract to Gilmer Construction Co., Little Rock, to erect two-story residence at 2123 Cumberland St.; cost \$4000.

D. C., Washington.—M. E. Ingalls, Cincinnati, O., has plans by J. H. De Sibour, Hibbs Bldg., Washington, for residence on 18th St. N. W.; four stories; Italian Renaissance style; Travertine stone and brown brick; fireproof construction; steam heat; gas and electric lighting; electric passenger elevator and dumbwaiter; slag roof; contract awarded to William Lipscomb & Co., 1405 F St. N. W., Washington.

Fla., Lakeland.—May Tomlinson awarded contract to Marshall & Sanders, Lakeland, to erect residence; 42x46 feet; nine rooms and two baths; ordinary construction; electric lighting; cypress shingle roof; cost \$2500; plans by H. L. Scott, Lakeland. (Recently noted.)

Ga., Atlanta.—Mrs. J. M. High awarded contract to C. E. Bowen, Atlanta, to erect residence at 1302 Peachtree St.; two stories; brick veneer; cost \$25,000; plans by W. T. Downing, Atlanta.

Ga., Atlanta.—W. P. Price, 147 People St., awarded contract to W. L. McLaure, Kennewick, Ga., to erect dwelling; 55x57 feet; mill construction; hot-water heat; electric lighting; shingle and tin roof; cost \$7000; plans by Morris & Morris, Atlanta. (Recently noted.)

Ky., Louisville.—Hiram J. Conn awarded contract to J. W. Bailey to erect dwelling; two stories and attic; eight rooms; mill construction; metal roof; plans by owner. (Recently noted to cost \$3500.)

La., Forest Hill.—D. R. Johnston awarded contract to rebuild store and dwelling. (Recently reported burned.)

Md., Baltimore.—Miles O'Connor, 615-20 Light St., awarded contract to erect store and dwelling. (See "Stores.")

Md., Baltimore.—Emmett C. Chase, 1026 Linden Ave., awarded contract to Provident Realty Corporation, Garrison & Piedmont Aves., Baltimore, to erect bungalow at Benlah Villas; two stories.

Md., Baltimore.—C. C. Knox awarded contract to Thomas German, Baltimore, to erect four residences on Harford Rd. near Mayfield Ave.; 15x19 feet; ordinary construction; furnace; electric lighting; tin roof; will

erect 20 more dwellings later; plans by Callis & Callis, 2000 St. Paul St., Baltimore.

Md., Baltimore.—Mrs. Mary Mylander, 311 N. Carrollton Ave., has plans by Jacob F. Gerwig, 600 Equitable Bldg., Baltimore, for 17 dwellings on Penrose Ave.; 15 14x50 feet and two 15x65 feet; two stories; brick; stone trimmings; cost \$25,000; awarded contract to A. C. Mylander, Saratoga and Calhoun Sts., Baltimore, for erection.

N. C., Wadesboro.—L. D. Robinson awarded contract to E. C. Ingram, Wadesboro, to erect residence; 10 rooms; ordinary construction; hot-water heat; slate roof; cost \$5000; plans by Wheeler & Stern, Charlotte. (Recently noted.)

N. C., Winston-Salem.—F. E. Griffith awarded contract to Paul Miller, Winston-Salem, to erect dwelling; two stories; eight rooms; frame; shingle roof.

Tenn., Nashville.—Dr. G. B. Winton will erect brick veneered residence on Highland Ave.; cost \$4000; 36x50 feet; ordinary construction; hot-air heat; slate roofing; contract awarded to H. S. Vaughan & Co.

Tex., Big Springs.—F. E. Abney awarded contract to A. R. Wetzel, Big Springs, for carpentry work on proposed residence in Borden county.

Tex., Cuero.—Herman Curtin awarded contract to erect bungalow at Terrell St. and Broadway; cost \$6000.

Tex., El Paso.—W. G. Roe awarded contract to Mayfield Realty Co., El Paso, to erect bungalow at 2001 Boulevard; six rooms; pebble dash effect; cost \$3200.

Tex., El Paso.—Mrs. J. L. Evans will erect five-room brick residence at 1008 E. Rio Grande St.; cost \$3000; awarded contract to Jolly & Ware, El Paso.

Tex., Floresville.—S. K. Franklin awarded contract to D. B. Little to erect residence; two stories; 12 rooms; shingle roof; cost \$5000. (Recently noted.)

Va., Willoughby Beach.—F. W. MacKenzie awarded contract to W. L. Hines, Norfolk, Va., to erect residence; three stories; frame and shingle; cost about \$1500; plans by Norman Sorey, Norfolk, Va.

GOVERNMENT AND STATE

Ky., Lexington.—Experiment Station.—Kentucky Experiment Station awarded contract to Combs Lumber Co. to erect chemical laboratories; 115x95 feet; ordinary construction; direct steam heat; Barrett's specification roofing; cost \$40,000; plans by Andersen & Frankel, Lexington. (Recently noted as receiving bids until June 25 for heating, lighting, plumbing and furniture.)

Tex., Austin.—Home.—Board of Managers of Confederate Woman's Home awarded contract at \$15,312 to C. W. Moore, Austin, to erect building; brick and stucco construction; capacity for 35 inmates; hospital in connection; also awarded contract at \$266 to Donnelly & White, Austin, for heating; at \$643 to John L. Martin, Austin, for plumbing, and at \$157 to A. E. Hancock, Austin, for wiring; T. H. Davis, chairman board. (Recently noted.)

HOTELS

Fla., Belleaire.—G. A. Miller, Tampa, Fla., has contract to erect two cottages in connection with Hotel Belleview; cost \$30,000; plans by Francis J. Kennard, Tampa, Fla.

N. C., Raleigh.—Henry E. Litchford awarded contract to D. C. Hill, Raleigh, to remodel Academy of Music Bldg. for addition to Wright's Hotel. (Previously noted.)

S. C., Bethune.—G. S. & G. B. King awarded contract to W. G. Adams, Camden, S. C., to erect hotel; 50x104 feet; three stories; brick; cost \$10,000. (Recently noted.)

Tex., Terrell.—John McGraw, Terrell, has contract at \$7750 for general construction on Shelby Hotel, and Kinneson Bros., Dallas, Tex., have contract at \$2998 for steam heating. (Previously noted.)

MISCELLANEOUS

Ga., Savannah.—Hospital.—St. Joseph Hospital trustees awarded general contract to Miles & Brandt, Atlanta, for erection of annex to hospital, to Peerless Heating & Plumbing Co., Savannah, for plumbing and heating, and to Savannah branch of Otis Elevator Co. for elevators; connected with present building by corridors on each floor; red face brick; Romanesque style; verandas; painted plaster walls; chapel; cost about \$75,000; plans by H. W. Whitcomb, Savannah.

Md., Baltimore.—Settlement-house.—Jewish Educational Alliance, 1204 E. Baltimore St., awarded contract to John Hiltz & Son, 1 Clay St., Baltimore, to erect S. Levy Memorial Bldg. at Baltimore St. and Central Ave.;

brick and stone; cost \$65,000 to \$80,000. (Recently noted.)

Md., Baltimore.—Home.—Exeter St. Rescue Home will expend \$6800 to erect rescue home for women; 18x56 feet; ordinary construction; steam heat; gas lighting; cement sidewalks; slag roof; plans by Owens & Sisco, Continental Bldg., Baltimore; contract recently noted awarded to Joseph Schamberger, 2122 E. Baltimore St., Baltimore.

N. C., Fayetteville.—Home.—L. Gentry, Fayetteville, has contract to erect five buildings for Cumberland County Home after plans by Benton & Moore, Wilson, N. C.

W. Va., Charleston.—Auditorium and Armory.—Charleston Auditorium Co. awarded contract at \$42,500 to Moore Construction Co., Charleston, to erect auditorium and armory building; 190x100 feet; two and three stories; drill hall and auditorium 163x100 feet, with seating capacity of 2600 people; total cost about \$65,000; plans by H. Rus Warner, Charleston. (Recently noted.)

RAILWAY STATIONS

Miss., Laurel.—New Orleans & Northeastern Railroad Co., D. D. Curran, president and general manager, awarded all contracts to erect passenger station and 600-foot umbrella shed; mill construction; general contract recently noted awarded to Jefferson Construction Co., New Orleans.

SCHOOLS

Ark., Fayetteville.—Trustees of University of Arkansas awarded contract at \$34,500 to G. H. McCauley, Fayetteville, to erect educational building; plans by J. T. W. Jennings, Merchants' Bank Bldg., Fort Smith, Ark. (Previously mentioned.)

Fla., Clearwater.—City awarded contract to A. E. Ehle, St. Petersburg, Fla., to erect school; two stories and basement; 92x62 feet; fireproof construction; cost \$16,000.

Ga., Pavo.—City awarded contract to Harden & Hall, Quitman, Ga., to erect school; cost \$35,000. (Recently noted.)

Ga., Pavo.—School Board awarded contract to Harden & Hall, Quitman, Ga., to erect school to replace burned structure; two stories; ordinary construction; electric lights; steam heat; cost \$10,000; plans by W. B. Camp, Jacksonville, Fla. (Recently noted.)

Ky., Lancaster.—City awarded contract to O. P. Raymond, Cynthiana, Ky., to erect graded school; cost \$30,000.

La., Columbia.—City awarded contract at \$10,550 to C. E. Andrews, Ruston, La., to erect school; plans by Smith & Barthel, Monroe, La. (not Xavier A. Kramer, Magnolia, Miss., as recently reported.)

Miss., Maben.—School Board awarded contract at \$1715 to Thomas B. Hentz to erect dormitory to high school; will install sanitary drying closet.

Miss., Olive Branch.—De Soto County Agricultural High School will expend \$8000 to erect dormitory for high school; ordinary construction; concrete foundation; gravel and shingle roof; plans by Jones & Furbinger, Memphis, Tenn.; contract recently noted awarded to J. E. Birmingham, Olive Branch.

Mo., St. Louis.—St. Boniface Catholic parish, Rev. Herman Nieters, pastor, awarded contract to Ziegelmeyer & Suter, St. Louis, to erect parochial school at 307-11 Schirmer St.; two stories and basement; four classrooms; cost \$19,000.

N. C., Asheville.—Asheville School for Girls awarded contract to Wren & Garland, Asheville, to erect addition to school building; 49x50 feet; ordinary construction; direct and indirect steam heat; electric lighting; freight elevator; cost \$15,000; plans by Smith & Carrier, Asheville.

N. C., Asheville.—Asheville School for Girls awarded contract to erect addition to present structure; brick and stone; three stories; first floor for classrooms; second floor for students; third floor as kitchen and dining-room; steam heat; electric lights; cost \$30,000.

Tenn., Knoxville.—Knox County Board of Education awarded contracts to erect Blooming Grove, Washington, Sunny View, Ramsey, Marble City and Hill schools.

Tenn., Memphis.—University of Tennessee awarded contract to J. A. Anderson, Memphis, to erect four-story laboratory on Munroe Ave., near Dunlap St.; cost \$22,000; plans by Jones & Furbinger, Memphis. (Previously noted.)

Tex., Flint.—City awarded contract to erect school; two stories; brick; six rooms; labor-

atory, principal's room, etc.; cost \$7000. Address The Mayor.

Tex., Runge.—District School Trustees awarded contract to erect addition to school; two stories; 20x30 feet.

Va., Bedford City.—School Board awarded contract to Overstreet & Wingfield to erect school building; cost \$50,000; plans by Heard & Cardwell, Lynchburg, Va. (Recently noted.)

W. Va., Keyser.—Board of Education awarded contract to W. A. Liller, Keyser, to erect school building; 100x70 feet; steam heat; electric lighting; metal roof; cost \$15,000; plans by C. W. Shelley, Keyser; will let contracts for plumbing and heating later. (Recently noted.)

STORES

Ala., Carrollton.—J. E. Upchurch awarded contract to Lindemood & Puckett, Columbus, Miss., to erect brick store building.

Ala., Cullman.—J. M. Kilpatrick awarded contract to Upshaw & Haynes, Cullman, to erect business building; two stories; brick.

D. C., Washington.—Milburn, Heister & Co., architects, Union Savings Bank Bldg., Washington, awarded contract to P. F. Gormley Company, Union Trust Bldg., Washington, to erect store and office building for R. P. Andrews Paper Co.; elevators and other equipment will be let under separate contracts. (Recently noted.)

Fla., St. Petersburg.—Ed. T. Lewis awarded contract to Frank Chase, St. Petersburg, to enlarge three stores at cost of about \$7000.

Ga., Savannah.—M. K. Jones Furniture Co. awarded contract to Collins Bros. Co., Savannah, to erect store building at West Broughton and Montgomery Sts.; three stories; red brick; plate-glass show windows; elevators; will also remodel portion of present building.

Ga., Savannah.—Morris-Sullivan Dry Goods Co. and Byck Bros. Shoe Co. leased stores at 23 and 25 Broughton St. West, and awarded contract to Collins Bros. Co., Savannah, for improvements, including copper and plate-glass fronts with marble bases with prism glasses and transoms; show windows on each side; ornamental metal ceilings; elevators.

La., Forest Hill.—D. R. Johnston awarded contract to erect store and dwelling to replace burned structure. (Recently reported burned.)

Md., Baltimore.—Miles O'Connor, 618-20 Light St., has plans by and awarded contract to J. W. Benton, 114 Gittings St., Baltimore, to erect store and dwelling at 618-20 Light St.; three stories; cost \$6000.

Miss., Jackson.—R. W. Millsaps awarded contract to Olson-Lesh Construction Co., Memphis, Tenn., to erect business building recently noted; reinforced concrete; cost \$60,000; plans by R. H. Hunt, James Bldg., Chattanooga, Tenn. (See "Machinery Wanted.")

Mo., Joplin.—Griswold Grocery Co. will erect addition to building; two stories and basement; brick; 29x102 feet.

Mo., St. Louis.—J. M. Carpenter Realty Co. awarded contract to Nicholas Pellgreen, St. Louis, to erect mercantile and office building at 312-14 N. 6th St.; fireproof; five stories; cost \$40,000; plans by Albert B. Groves, St. Louis. (Recently noted.)

Mo., St. Louis.—Nicholas Pellgreen awarded contract to Pellgreen Construction Co., La Salle Bldg., St. Louis, to erect store and office building; 68 feet 2 1/4 inches by 74 feet; fireproof steel construction; low-pressure system of heating; passenger elevator; composition roof; cost \$50,000; plans by A. B. Groves, Stock Exchange Bldg., St. Louis. (Recently noted.)

N. C., High Point.—W. F. Ellis will expend \$8300 to erect store; 48x140 feet; ordinary construction; electric lighting; gravel roof; plans by Brewer & Gaeys, Greensboro; contract awarded to J. M. Hobbs, Greensboro. (People's House Furnishing Co. recently noted to erect building.)

S. C., Columbia.—Richard C. Keenan awarded contract to John J. Cain Construction Co., Columbia, to erect apartment-house and two stores. (See "Apartment-Houses.")

Tenn., Memphis.—F. F. Hill awarded contract to L. L. Lindsay, Memphis, to erect store at 230 Monroe Ave.; cost \$10,000.

Tenn., Memphis.—W. H. Reid awarded contract to C. J. Wagner, Memphis, to erect business building on Monroe Ave.; two stories; brick and concrete; 148 1/2 feet deep; concrete foundation; terra-cotta and plate-glass front; 12 stores with frontage of 22 1/2 feet, six 45 feet and four 67 1/2 feet; fireproof walls and partitions; freight elevators; steam heat; cost \$125,000; plans by G. M. Shaw, Memphis; awarded contract to Koeh-

ler Bros., Memphis, for foundation; also awarded contract to construct culvert over Bayou Gayoso to cost about \$10,000, over which building will be erected. (Recently noted.)

Tex., El Paso.—Central Improvement Co. awarded contract to Ponsford Bros., El Paso, to erect block of six stores at Myrtle Ave. and Kansas St.

Tex., Brenham.—H. F. Kolwes awarded contract for improvements to store, to include iron front, two plate-glass show windows, erection of warehouse at north end of structure, etc.

Tex., Dallas.—Sears, Roebuck & Co. of Dallas awarded contract to Hughes O'Rourke Construction Co., Dallas, to erect store building; nine stories and basement; 142x166 feet; fireproof construction; gravel roof; cost \$234,000; plans by Lang & Witcheil, Wilson Bldg., Dallas; mechanical equipment will include gravity and belt conveyors, pneumatic tube and complete automatic telephone systems. (Previously noted.)

Tex., El Paso.—Broadus & Davis awarded contract to erect store and apartment building. (See "Apartment-Houses.")

Tex., Mart.—W. H. Criswell awarded contract to erect business building on Texas Ave.

Va., Petersburg.—C. C. Alley Co. will expend \$16,000 to erect store; 40x150 feet; ordinary construction; brick; gas and electric lighting; electric elevator; slag roof; plans by S. Dailey Craig, Petersburg; contract awarded to G. B. Keeler & Son, Petersburg. (Recently noted under "Warehouses" and "Miscellaneous Factories.")

W. Va., Martinsburg.—Max Von Schlezell awarded contract to Acme Construction Co., Martinsburg, to erect proposed business building; 45x120 feet; brick; mill construction; composition and tile roof; plans by Harding & Upman, Woodward Bldg., Washington, D. C.

RAILROAD CONSTRUCTION

RAILWAYS

Ark., Fort Smith.—The Fort Smith, Arkoma & Wilburton Railway Co. is reported to have purchased 42 acres of land at Arkoma, Okla., for yard. M. C. Burke of Burke Bros., contractors, Fort Smith, Ark., and others are interested.

Ark., Newport.—Missouri Pacific.—Iron Mountain system is reported to have begun work at Hoxie, Swifton, Bradford and Bald Knob on double-tracking from Hoxie to Texarkana. J. C. Jowers is in charge at Swifton. E. F. Mitchell is chief engineer at St. Louis.

D. C., Washington.—The Maryland Public Service Commission has authorized the Washington, Westminster & Gettysburg Railway Co. to build 18 miles of line from Brentwood to Sandy Spring, Md., and issue \$144,000 common and \$100,000 preferred stock; also \$630,000 of first mortgage bonds, not less than 5 per cent. I. H. Saunders is secretary at 404 Southern Bldg., Washington, D. C.

D. C., Washington.—The Washington & Great Falls Railway & Power Co. is working on preliminaries for the construction of a double-track railroad from Wisconsin Ave. and Bradley La., near Chevy Chase, to the Great Falls of the Potomac. Directors are Harry E. Karr, president; John D. Nock and John I. Rowe of Washington.

Fla., Live Oak.—The Live Oak, Perry & Gulf Railroad Co. has recently been reorganized and will rebuild a considerable portion of its line, reducing grades and curves and laying heavier rails, besides otherwise improving the property. R. P. Hopkins, Live Oak, Fla., is general manager.

Fla., Sarasota.—The Seaboard Air Line proposes to improve its Sarasota line to a thoroughly good condition. C. H. Hix is vice-president and general manager and W. L. Seddon is chief engineer, both at Portsmouth, Va. A force of men has already been placed upon the work.

Fla., Tampa.—Tampa & Gulf Coast Railway is reported planning construction of a line southward from Tarpon Springs to Largo, Fla. Chas. H. Brown of Tampa is president.

Ga., Atlanta.—The court has approved the proposed issue of \$5,000,000 of receivers' certificates for the Atlanta, Birmingham & Atlantic Railroad, of which \$3,750,000 will be used for refunding and \$1,250,000 for new rails, ballasting, enlarging terminals at Brunswick and other improvements. H. M. Atkinson of Atlanta and S. L. Schoonmaker of New York are receivers. Alex. Bonnyman, Atlanta, is vice-president and chief engineer.

THEATERS

Ala., Mobile.—C. C. Schreiner awarded contract to J. M. Harbin, Mobile, to erect theater; 50x110 feet; semi-fireproof construction; gas heat; gas and electric lighting; Carey's roofing; cost \$10,000; plans by Stone Bros., Mobile. (Recently noted.)

Md., Baltimore.—Edmondson Amusement Co. has plans by and awarded contract to Samuel A. Bersterman, 36 N. Potomac St., Baltimore, to erect moving-picture theater; 36x100 feet; fireproof construction; steam heat; electric lighting; slag roof; cost \$12,000.

Tex., Bay City.—Manager Korn of Grand Opera-House awarded contract to erect air dome.

WAREHOUSES

Ga., Savannah.—Seaboard Air Line Railway Co., W. L. Seddon, chief engineer, Portsmouth, Va., will expend \$145,000 to construct cotton sheds covering seven acres; also 600-foot transfer shed; ordinary construction; contract recently noted awarded to Burwell & Hillyer, Jacksonville, Fla.

Ky., Horse Cave.—Loose Leaf Tobacco Warehouse Co. awarded contract to Clarence Owen at \$12,600 to erect warehouse; two stories; brick. (Recently noted.)

Tenn., Memphis.—John Wade & Son awarded contract to erect warehouse; cost \$20,000.

Tex., Brenham.—H. F. Kolwes awarded contract to erect warehouse, etc. (See "Stores.")

Tex., Dallas.—Sears, Roebuck & Co. of Texas awarded contract to erect warehouse and store building. (See "Stores.")

Va., Petersburg.—British-American Tobacco Co., New York office, 200 Fifth Ave., will expend \$40,000 to erect seven storage sheds; 140x102 feet; ordinary construction; slag roof; contract recently noted awarded to E. L. Bass, South Richmond, Va.

Ga., Atlanta.—Special dispatch to Manufacturers Record says contracts are let for entire construction of Atlanta & Macon Railway through South Atlantic Contracting & Construction Co., Brown-Randolph Bldg., Atlanta, and Hollins N. Randolph, secretary of the railroad company has applied for authority to increase capitalization from \$100,000 to \$3,000,000. After amendment is granted work will begin on line of 88 miles from Atlanta to Macon.

Ga., Bainbridge.—Atlantic Coast Line, it is reported, will build a long concrete trestle approach and a concrete bridge over the Flint River at Bainbridge. E. B. Pleasants is chief engineer at Wilmington, N. C.

Ga., Macon.—Concerning the proposition to build a railroad from Macon to Waverly Hall, Ga., about 70 miles, S. W. Hatcher, Sr., writes that a company has not been organized, but that right of way would be donated by people along the route. Construction could be reduced to 55 miles by connecting at Moran with the Macon & Birmingham Railroad. It is desired to interest some company in the plan. Route is from Waverly Hall via Talbotton, Prattburg, Musella and Ceres to Morans, thence to Macon over the Macon & Birmingham. Address Secretary Hyman of the Macon Chamber of Commerce.

Ga., Moultrie.—Flint River & Northeastern Railroad Co. has awarded contract to John F. Lamb of Thomasville, Ga., to reduce grade, make fills and surface its line between Pelham and Doerun, Ga. Estimated about 50,000 yards of earth to handle. F. R. Piddock, Moultrie, Ga., is vice-president and general manager, as well as of the Georgia Northern Railway.

Ga., Savannah.—The Great Eastern Lumber Co., capital \$1,000,000, proposes to build a railroad from Augustine Creek along the Savannah River several miles, with connections to other railroads, in connection with its plans for establishing a plant at the Potter place, west of Savannah. C. E. Gill, vice-president, is in active charge at Savannah. Construction is reported begun. Geo. K. Wentworth of Chicago is president of the company; T. P. Goodbody of the same city is treasurer, and N. J. McCormack of Reinbeck, Iowa, is secretary. Chas. H. Burras of Chicago and William Farson of New York are also directors.

Ga., Tifton.—Charter is granted to the Americus, Tifton & Atlantic Railroad Co., capital \$100,000, for its proposed line from Americus, Ga., to the Florida boundary, altogether about 200 miles. H. H. Tift of Tifton, Ga.; J. S. Shingler, Ashburn, Ga., and others, incorporators. Will reach to Charleston

county, Ga., and then go to Jacksonville, Fla. (See Manufacturers Record, May 16.)

La., New Orleans. Charter is filed for the New Orleans & Western Railroad Co. to build the proposed electric railway from Gretna to Waggaman, La., about 10 miles. Capital \$1,500,000. C. D. Warren of Toronto, Canada, is president and E. Howard McCaleb, secretary. O. T. Maler, vice-president of the New Orleans Southern & Grande Isle Railway, of which Mr. Warren is president, is quoted as saying that construction of the proposed electric railway will begin as soon as the high water subsides. This will be under franchise recently acquired by Leo A. Warren.

La., Shreveport.—A report from Benton, La., says that W. B. McCormick announces franchise has been granted for an electric interurban railway from Bossier City to Shreveport, crossing Red River bridge now building.

Miss., Gulfport.—W. H. Hardy, president of the Gulfport & Western Railroad Co., which proposes to build a line from Gulfport, Miss., to Covington, La., is quoted saying that E. McL. Long of New York has completed a survey and it is almost an air line between the two points, being only 62 miles as compared with 60 miles perfectly direct. It is hoped to construct the road next year.

Mo., Kansas City.—H. L. Harmon, president, says that the Kansas City Industrial Railway Co. will build 7½ miles of line from 15th and Indiana Sts. to Woodland and 47th Sts., the grade being practically a water level. Ordinance must first be obtained from the city. No grade crossings permitted. Other incorporators and directors are Wm. T. Johnson, vice-president; A. L. Cooper, secretary; Thos. Stinson, John E. Wilson, Wm. C. Lucas and John S. Wright, all of Kansas City.

Mo., Bixby.—Iron County Central Railroad Co. incorporated with \$60,000 capital to build line six miles long from Bixby to timber lands. Incorporators, David A. Bixby, H. W. Wolff, L. T. Carroll, Milo C. Shands and A. P. Brigham, all of St. Louis.

N. C., Black Mountain.—Dickey & Campbell of Black Mountain, who are building the Black Mountain Railway, are reported contemplating the construction of an extension of three miles to the summit of Mount Mitchell.

N. C., Greensboro.—Incorporators of the Greensboro, Roxboro & Norfolk Railway Co. have called meeting for organization July 3, the call being signed by R. C. Hood, A. B. Kimball, C. D. Benbow, Garland Daniel, J. W. Patterson and S. A. Caviness. Proposed route is from Greensboro northeast to Roxboro, N. C., about 50 miles.

N. C., Newberne.—Reported that the Atlantic Coast Line is investigating with a view to constructing an extension north from Newberne. E. B. Pleasants, Wilmington, N. C., is chief engineer.

Tenn., Clarksville.—A. C. Murray says that the plans of the Clarksville & Dunbar Cave Railway Co. of Clarksville are not sufficiently matured for announcement. (See Manufacturers Record of June 20.)

Tenn., Memphis.—A report says that Illinois Central Railroad will immediately after July 1 request bids for the construction of elevated track in connection with its proposed Union Station to be occupied in connection with the Rock Island and Frisco systems, this being the start of work on the terminal. A. S. Baldwin, Chicago, is chief engineer.

Tenn., Memphis.—Reported that the Lakeview Traction Co. will be prepared by August 1 to undertake improvements and extensions. Leroy Percy and others are the committee. From 25 to 30 miles of extension are contemplated.

Tex., Galveston.—Santa Fe is reported about to make improvements, including track changes at Longview, widening embankment on Plainview branch, rearranging track at Killean and building spur track and two cross-overs at Beaumont. Tex. F. Merritt is chief engineer at Galveston.

Tex., Corsicana.—G. R. Turner is promoting plans for the construction of a railroad from Corsicana to Palestine, Tex., about 60 miles, and Corsicana has agreed to take \$100,000 of stock, it is reported. A similar amount is asked of Palestine.

Tex., Dallas.—Col. F. G. Pettibone, vice-president and general manager of the Santa Fe lines in Texas, is at Galveston, Tex., and is reported as saying, after an extended conference of officials representing various railroads entering Dallas, that it is decided to build a new Dallas terminal station at a total approximate cost of \$5,000,000, which will include several miles of terminal tracks.

He is president of the Union Terminal Co. of Dallas, which will open offices in Dallas, and Murrell L. Buckner is secretary. The Southern Pacific, the Frisco, the Rock Island, the St. Louis Southwestern, the Missouri, Kansas & Texas; the Texas & Pacific, the Trinity & Brazos Valley and other lines are represented in the plan. C. H. Dana will be chief engineer.

Tex., Denton.—Several prominent business men of Fort Worth are reported to have made a proposition to the Denton Chamber of Commerce to build an interurban railway between the two cities in return for a subscription of \$100,000 in stock and right of way to the county boundary. The secretary of the Chamber of Commerce may give information.

Tex., Denison.—Dennis & Ramsay are reported to have contract for the cut-off between the Dallas and Fort Worth divisions of the Missouri, Kansas & Texas Railway, and will begin work within two weeks. An 80-foot bridge of concrete and several concrete culverts are required.

Tex., Graham.—It is understood that the Rock Island contemplates general improvements to the roadbed and track of the Graham branch. H. M. Stone is chief engineer at Fort Worth, Tex.

Tex., Kingsville.—The St. Louis, Brownsville & Mexico Railway, according to amendments to its charter, proposes to build branches and extensions amounting to 108 miles of new track, including Bloomington to Seadrift, 20 miles; thence to Port O'Connor, 19 miles; Bloomington to Victoria, 15 miles; spur to the Victoria Compress Co.'s plant, 1 mile; Heyser to Austwell, 25 miles; Harlingen to Sam Fordyce, and thence to Roma, 33 miles. Some of these pieces of work have been reported previously. F. G. Jonah, St. Louis, Mo., is chief engineer.

Tex., Sugarland.—Reported that the Railroad Commission has approved \$296,654 of Sugarland Railroad Co. bonds for proposed extension from Cabell Station to Rogers, 24 miles, connecting with the Missouri, Kansas & Texas Railway. Jonathan Lane of Houston, Tex., is counsel. W. T. Eldridge of Sugarland, Tex., is president.

Tex., Temple.—Missouri, Kansas & Texas Railway, it is reported, will double-track line south from Temple to Echo Junction, three miles. A. M. Echeson is chief engineer at Dallas, Tex.

Va., Norfolk.—The Norfolk Southern Railroad is preparing to build two miles of side-tracks at Carolina Junction. F. L. Nicholson is chief engineer.

W. Va., Cameron.—An official letter denies press report that the Baltimore & Ohio Railroad is surveying between Elm Grove and Cameron, W. Va.

W. Va., Fairmont.—H. P. Keenan, Boothsville, W. Va., says that the Grafton, Fairmont & Clarksburg Railroad Co. is to build 30 or 35 miles of line connecting the three places named and also Boothsville. There will be two or three large bridges over Valley River and five creek bridges. Country rolling and level, 5 per cent. being the steepest grade. It is desired to begin construction before next winter. Others interested include Chas. F. Sutherland, president, Morgantown, W. Va.; A. E. N. Means, vice-president, Grafton, W. Va.; A. B. Corder, treasurer, Bridgeport, W. Va.; Eugene Sommerville, secretary, Grafton; J. M. Roberts, general manager and chief engineer, Pittsburgh, Pa.; B. F. Bailey, Grafton; C. Lee Reynolds, Flemington; A. Staeley, Fairmont; Leo Kennedy, Boothsville; M. W. Mead, Pittsburgh; Chas. C. Benton, Philadelphia, and Henry Molz, Kittanning, Pa.

W. Va., Morgantown.—A letter says that Clay District of Monongalia county has voted a \$200,000 bond issue to aid construction of the Morgantown & Dunkard Valley Railroad from Cassville to Blacksville, 15 miles. G. B. Hartley, Morgantown, W. Va., is chief engineer.

W. Va., White Sulphur.—The White Sulphur & Huntersville Railroad Co. has been chartered for a line from White Sulphur to Huntersville, Va., about 40 miles; capital \$30,000. This may be for an extension of the existing Iron Mountain & Greenbrier Railroad, which runs north from White Sulphur to Wade, about 25 miles, and the extension would be about 15 miles. Incorporators, Frank A. Hauck of Ronceverte, W. Va.; Frank Hoan, Joseph T. England, Wm. R. Hudgins and Warren B. Bunting of Baltimore.

W. Va., Williamson.—Waugh, Calder & Co., Williamson, W. Va., are reported to have a five-mile contract on the Williamson & Pond Creek Railroad, which the Norfolk & Western interests are building from Williamson into Pike county, Kentucky.

STREET RAILWAYS

Ala., Birmingham.—The Kelley Street Railway Co. has applied through Nat. L. Miller, counsel, for franchise to build and operate a street railway about 12 miles long. George C. Kelley is quoted saying Eastern capital is interested and that the central point on the line will be 20th St. and Third Ave. A viaduct will cross the railroads to reach the south side of the city extending to South Highlands and terminating at Nlazuma Ave. and Linden St. Another branch will go to the Phoenix Club on 20th St. On the north side the lines will reach Norwood and West Highlands. The line is to be the nucleus, it is said, of an extensive system in the Birmingham district. The Kelley company are engineers at the First National Bank Bldg. in Birmingham.

Ala., Huntsville.—A report from Gadsden says that the Alabama Power Development Co., of which R. A. Mitchell of Gadsden is manager, has bought the Huntsville street railway. Improvements may be made.

Mo., St. Louis.—County Court at Clayton has granted franchise to Paul Brown and associates for an electric railway two miles long from a point 300 feet south of Clayton Rd., at the city limits of St. Louis, to the right of way of the St. Louis & Suburban Railway Co. Roland L. Johnston, attorney for the applicants, is at Valley Park, Mo.

N. C., Charlotte.—Charlotte Electric Railway Co. has been granted permission to build double track on West Ave. between the Southern Railway's passenger station and Irwins Creek.

N. C., Hendersonville.—The Laurel Park Street Railway Co., says a report, will convert its steam line to electric operation.

Okla., Tulsa.—The Tulsa Street Railway Co. is reported to have sold \$1,000,000 of 3 per cent. 20-year bonds through the Bankers Trust Co. of New York, and will make extensions and improvements.

Tenn., Johnson City.—The Johnson City Traction Co., capital \$10,000, is reported incorporated by W. V. N. Powelson, E. H. Shufro, W. T. Pearson and W. F. Carless.

Tex., Austin.—President W. J. Jones is reported to have ordered material for a two-mile extension of the Austin Street Railway's W. 6th St. line to the Austin dam.

Tex., Houston.—It is announced that most of the \$250,000, which will be spent by the Houston Electric Co., will be used for rebuilding with new and heavy rails on concrete base 23,970 feet of track and revising lines. None is for extensions. David Daly is manager.

Va., Richmond.—The Common Council has adopted a franchise ordinance granting authority to the Richmond & Henrico Railway Co. for 15 years for street railway extension and light and power service.

MACHINERY, PROPOSALS AND SUPPLIES WANTED

Manufacturers and others in need of machinery or supplies of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery or supplies needed we will make their wants known free of cost, and in this way secure the attention of manufacturers and dealers throughout the country. The Manufacturers Record has received during the week the following particulars as to machinery and supplies wanted.

Apple Trees.—Ozark Fruit & Land Co., T. L. Irion, president, Pangburn, Ark., wants prices on apple trees in lots of 10,000; varieties best suited to that section.

Bending Rolls.—Pennsylvania Equipment Co., West End Trust Bldg., Philadelphia, Pa., wants plate-bending rolls, 15 inches diameter, to take plates 12 feet wide by ½ inch.

Boiler.—E. K. Vietor, Richmond, Va., wants to purchase 150-horse-power boiler.

Boiler.—O. R. Whitney, 39 Cortlandt St., New York, wants 65 to 75-horse-power vertical boiler; second-hand; prompt delivery; give description and price first letter.

Boiler and Furnaces.—Proposals received by Kentucky State Board of Control for Charitable Institutions, Frankfort, Ky., up to noon July 12 for water-tube boiler and four down-draft smokeless furnaces or mechanical stokers, to be installed at Western State Hospital for Insane, Hopkinsville, Ky.; specifications at office of board or may be obtained from D. X. Murphy & Bro., architects, Louisville, Ky., upon request; each bid accompanied by certified check for 5 per cent. of amount bid.

Bridge.—E. K. Vietor, Richmond, Va., wants prices on movable bridge (pivot or similar to gang plank) to connect buildings across railroad cut.

Bridges.—Dillon County Commissioners receive bids until noon July 10, at Dillon, S. C., for furnishing all material and labor and constructing two reinforced concrete bridges across Little Pee Dee River, plans for which will be on file with Clerk of board by July 1; alternate bids using steel superstructure on same reinforced substructure, accompanied by complete plans of steel work, will be considered; span of bridges, 85 feet and 45 feet, latter being on 45-degrees skew; R. L. Moody, Clerk; Edwin M. Wayland, Engineer.

Bridge Construction.—Bids received 12 noon July 2 at Lebanon, Va., for construction of steel bridge across Clinch River near Finney, Va.; length 344 feet 9 inches; 12-foot roadway; two standard 119-foot and two standard 50-foot spans; cement rubble substructure; \$250 certified check; plans and specifications after June 20 at office of P. St. J. Wilson, State Highway Commissioner, and of clerk of Circuit Court, Russell county, Lebanon; blueprints obtainable from Childrey-Sunday Company, Richmond.

Bridge Construction.—J. D. Laughlin, clerk of Warren county, Vicksburg, Miss., receives bids until noon July 3 to build steel bridge over Ball Ground Creek, in fifth district, as per plans and specifications on file with chancery clerk; certified check \$500;

bidders to specify time for completing contract.

Bronze Bars, etc.—Proposals received at office of General Purchasing Officer, Indian Canal Commission, Washington, D. C., until 10.30 A. M. July 3 for furnishing bronze bars, sheet brass, brass tubing, sheet lead, sheet zinc, iron and steel washers, wire belting, etc.; blanks and general information relating to circular (716) obtainable from this office or offices of assistant purchasing agents, 24 State St., New York, and 614 Whitney-Central Bldg., New Orleans; also from United States Engineer offices in Baltimore, Philadelphia, Pittsburgh, Boston, Buffalo, Cleveland, Cincinnati, Chicago, St. Louis, Detroit, Milwaukee, St. Paul, Chattanooga, Louisville, Mobile and Galveston; Commercial Club, Kansas City, and Chamber of Commerce, Quincy.

Building Equipment.—R. W. Millsaps, Jackson, Miss., receives bids until June 2 on heating, plumbing, wiring, lighting fixtures, elevators, vacuum cleaning system, hardware, etc., for \$69,000 business building; certified check for 2 per cent. amount of bid; plans may be seen at Contractors and Dealers' Exchange, New Orleans, La., or at office of architect, R. H. Hunt, James Bldg., Chattanooga, Tenn.

Building Materials.—W. B. Brown, 509 W. Broad St., Savannah, Ga., wants prices on stone and terra-cotta for \$10,000 church.

Building Materials.—A. A. Booth, care of Chesapeake & Ohio Railway Co., Richmond, Va., wants prices on building materials for \$5000 dwelling.

Building Materials.—J. E. Hellams, Room 1 Bank of Mobile Bldg., Mobile, Ala., wants prices on tile for roofing and floors, marble, tile and wood mantels, hardwood floors, fancy plaster cornices and doors, reinforced concrete beams and floors, cut stone, slate, sheet and mill work, plumbing, electric wiring and fixtures, rough and finished hardware, plate and art glass, paint, hard oils and lumber.

Building Removal.—See "Ice Plant."

Button Machinery.—Dr. J. H. Forrest, Bradenton, Fla., wants information on manufacturing buttons from mussel or clam shells and prices on machinery.

Canal.—Gabriel Bros. Construction Co., Holley, N. Y., wants bids on construction of barge canal; work consists of 60,000 cubic yards excavation (all earth) and 18,000 cubic yards concrete; in excavation will be constructed concrete trough composed of two side walls and connecting floor containing 14½ cubic yards concrete to linear foot; walls 20 feet high, 12-foot base, 2-foot top and 107 feet apart, with floor between; floor

Electric Railroad to build between the station and Laurel Park. The railroad will be operated by the Baltimore & Annapolis Electric Co. The railroad will be 1.1 miles long and will have 12-inch bottom thickness covered with five single ply waterproofing, which, in turn, will be covered with six-inch sand fill, with top-dressing of four-inch concrete; location, 20 miles west of Rochester, N. Y.

Canal Construction.—Drainage Commissioners Site of Florida, J. C. Luning, secretary, Tallahassee, Fla., receive bids until 10 A. M. August 10 to excavate three drainage canals on East Coast of Florida, near Pompano, Fulford and Larkin; aggregate length, 16 miles; bottom width, 25 feet; mean depth, 6 feet; excavation, 400,000 cubic yards earth and 200,000 cubic yards rock; specifications and blank proposal forms may be obtained from J. O. Wright, chief drainage engineer, Tallahassee.

Canning Machinery.—D. B. McNeill, Lumberton, N. C., wants to correspond with manufacturers of canning machinery.

Coal.—Department of Public Improvements, Subdepartment Harbor Board, Baltimore, Md. Proposals addressed to Board of Awards received at office of City Register, City Hall, until 11 A. M. July 3, 1912, for furnishing and delivering such bituminous coal as may be required by board until June 20, 1913, according to specifications obtainable at the office of Harbor Engineer; certified check for \$100; O. F. Lackey, Harbor Engineer.

Cement.—J. F. Almond Sales Co., Charlotte, N. C., wants dealers' prices, direct from producers, on cement.

Concrete Mixer.—Ira C. Loveless, Moundville, Ala., wants to buy or rent concrete mixer.

Cotton Machinery.—H. M. Shannon, Richmond, Tex., wants addresses of makers of machinery for manufacturing toweling and twine.

Crushing Machinery.—T. R. Stewart, Mannington, W. Va., wants prices on stone-crushing machinery.

Cutting Machinery.—Tofoli & Marus Marble & Tile Co., Box 977, Charlotte, N. C., wants "snips" or tweezers for cutting tile.

Drainage.—Sealed bids received by Board of Commissioners, Camden Run drainage district, at office of Dr. Samuel W. Gregory, secretary, in Elizabeth City, N. C., until 2 P. M. July 23 for construction of about 16 miles drainage canals, according to plans and specifications now on file in office of clerk of Superior Court of Camden county; canals from 6 to about 11 feet in depth; from 14 to 30 feet bottom width, with bank slope of one-half to one. Engineer's estimate of cost of work is: Clearing 15.7 miles right of way, \$30 per mile; excavating 538,132 cubic yards earth, at 8 cents; building bridges, \$225; total, \$46,115.56; work must begin not later than October 1, 1912, and be completed within 16 months from that time; certified check for \$500.

Dredge Bucket.—O. R. Whitney, 39 Cortlandt St., New York, wants second-hand three-quarter-yard clamshell bucket for prompt delivery; give description and price first letter.

Electric Light Plant.—Mrs. Calvin S. Smith, 3982 Lake Ave., Chicago, Ill., is considering electric-light plant for dwelling at Sarasota Bay, Fla.

Electric Light Plant.—Louis Brown, Box 77, Savannah, Ga., wants proposals on electric-light plant installed complete; 50 houses, 10 stores and street lights; send blank for specifications, etc.

Electrical Machinery.—Pennsylvania Equipment Co., West End Trust Bldg., Philadelphia, Pa., wants 400 to 500-kilowatt generator, 3 phase, 60 cycles, 2300 volts.

Electrical Supplies.—Baker, Payne & Baker, Burkesville, Ky., want wiring for houses; also want prices on tungsten lamps.

Electroplating Plants.—Fred. C. Foley, 169 Lawton St., Atlanta, Ga., wants addresses of manufacturers of electroplating equipment or plants.

Elevators.—See "Building Equipment."

Fire Department Equipment.—See "Pumping Machinery."

Galvanizing Plant.—Southern Structural Steel Co., San Antonio, Tex., wants information on plant to galvanize heavy steel bars, plate and grating sections; some sections eight feet square; wants data on approximate cost of such work, including cost of material (or coating) applied to steel.

Gas Franchise.—Sealed bids received by City Council, St. Petersburg, Fla., at office of W. F. Divine, City Clerk, until 7.30 P. M. July 2 for purchase of gas franchise; certified check for \$1000 to accompany bid; copy of franchise furnished on application.

Gasoline Engine.—Ira C. Loveless, Moundville, Ala., wants to buy or rent small gasoline engine.

Gasoline Engine.—Brannon & Rogers, 302½ Main St., Houston, Tex., want 6 to 10 horse-power second-hand gasoline engine.

Glass Fronts, etc.—E. B. Ragan & Son, Hamburg, Ark., wants prices on glass fronts and galvanized-iron fronts for warehouse.

Grading.—Tazewell County Supervisors, D. B. Daniel, chairman, Tazewell, Va., receive bids until noon July 9 to grade about 18 miles of roads in Jeffersonville district; plans and specifications on file at County Engineer's office; certified check \$500.

Hammer.—O. R. Whitney, 39 Cortlandt St., New York, wants second-hand sheathing hammer; prompt delivery; give description and price first letter.

Heading Machinery.—J. J. Parker, McKenzie, Tenn., wants second-hand heading equipment; state price of each machine.

Heating Plant.—J. E. Hellams, Room 1 Bank of Mobile Bldg., Mobile, Ala., wants prices on hot-air heating plant for residence.

Heating Plant.—See "Building Equipment."

Heating Plant.—A. A. Booth, care of Chesapeake & Ohio Railway Co., Richmond, Va., wants prices on steam or vapor heating plant for \$5000 dwelling.

Ice Plant.—Hygeia Ice Co., Frederick, Md., wants bids on furnishing ice cans, steam condenser, filter, etc.; also on tearing down, removing and erecting plant complete.

Knitting Machinery.—H. M. Shannon, Richmond, Tex., wants addresses of manufacturers of hosiery knitting machinery.

Lathe.—A. J. Baldwin, Dawson, Ga., wants engine lathe, 12-inch swing; 4 to 6-foot centers; new or second-hand.

Locks Machinery.—United States Engineer Office, 337 Federal Bldg., Detroit, Mich. Sealed proposals for machinery and valves for new lock at St. Marys Falls Canal, Sault Ste. Marie, Mich., received until 3 P. M. July 25, and then publicly opened. Information on application. C. McD. Townsend, Colonel, Engineers.

Looms.—H. M. Shannon, Richmond, Tex., wants addresses of manufacturers of machinery for weaving rugs from old carpets.

Machinery.—Technisches Bureau, Victor Kraus and Max Heller, No. 2 Jungmannstrasse, Prag-Kgl. Weinberge, Austria-Hungary, wants to correspond with American manufacturers of machinery; view to representation; especially interested in equipments and installations for type foundries, etc.

Men's Furnishings.—Geo. Meindanis, Tarpon Springs, Fla., wants to correspond with manufacturers and jobbers in men's furnishings, shoes, etc.; dealers' prices.

Mill Work.—A. J. Boots, 15 Lee Bldg., Memphis, Tenn., wants prices on mill work.

Mining Machinery.—Newton County Oil, Gas & Mineral Co., D. L. Cooley, president, Swain, Ark., wants prices on mining machinery.

Mortar Colors.—Mathews-Curtis Company, Clifton Forge, Va., wants prices on mortar colors.

Office Fixtures, etc.—W. D. Coggeshall, Darlington, S. C., wants price on office fixtures, skylights, store fronts, metal roofing, etc.

Paint.—See "Mortar Colors."

Paving.—City Commissioners, Huntington, W. Va., receive bids until noon July 22 to grade, curb and pave with vitrified brick 4th and 5th Sts., Eighth Ave. and several alleys; plans and specifications on file with A. B. Maupin, City Engineer; certified check \$500.

Paving, etc.—Commissioners District of Columbia, Washington, D. C., receive bids until 2 P. M. July 5 to grade certain streets, aggregating 102,000 cubic yards; also lay cement sidewalks; proposal forms and specifications, etc., obtainable from chief clerk, Engineer Department, Room 427 District Bldg.

Paving.—Baltimore (Md.) Board of Awards receives bids at office of City Register, City Hall, until 11 A. M. July 3 to grade, curb and pave with sheet asphalt portions of Orem, Parkwood and Woodbrook Aves., 5000 square yards; plans and specifications on file with Commissioners for Opening Streets, Eugene E. Grannan, president, city hall; deposit of \$5 required for each set of specifications covering contract.

Paving.—Chairman of street committee, Atlanta, Ga., receives bids until 3 P. M. June 28 to pave McLendon St. from Moreland to Mayson Ave. with vitrified brick between tracks of Georgia Railway & Electric Co., about 2300 square yards, and outside tracks with asphaltic macadam, about 7500 square yards; specifications furnished on

application to R. M. Clayton, chief of construction.

Paving.—Baltimore (Md.) Board of Awards receive bids until 11 A. M. July 3 to pave Park Ave., Lanvale St., etc., included in contract No. 32, with sheet asphalt or bituminous concrete, 33,150 square yards, and with vitrified brick, 1330 square yards; certified check \$1800; also East, Front and other streets, Contract No. 33, with vitrified block, 9750 square yards; certified check \$900; specifications and proposal sheets may be had on application to Paving Commission, R. Keith Compton, chairman, city hall; deposit of \$5 required for specification covering each contract.

Pump.—E. K. Vletor, Richmond, Va., wants prices on pump for hydraulic presses.

Pasteboard-cone Machinery.—R. H. Crichton, secretary Industrial Club, Lumberton, N. C., wants prices on equipment for manufacturing pasteboard cones for spinning mills.

Paving.—Board of Awards, City Hall, Baltimore, Md., received bids until June 26 for paving contracts Nos. 29, 30 and 31; sheet asphalt, 13,650 and 9100 square yards; vitrified block, 5150 square yards; wood-block liners, 1115 square yards. (Name of city omitted in recent complete statement.)

Paving.—L. P. Slater, City Clerk, Portsmouth, Va., receives bids until noon July 2 to pave roadway of 1st St. from Causeway to Navy-yard gate with vitrified brick on five-inch concrete base; five-inch granite curbing; bids to be submitted for completed work as per schedule; certified check 2½ per cent. of bid; E. B. Hawks, chairman street committee.

Paving, etc.—Board of Affairs, Charleston, W. Va., receives bids until 3 P. M. July 1 to pave with brick and sewer Duffy St. from Washington to McClung St.; plans, profiles and specifications on file with City Engineer, Bradford Bldg.; further information may be obtained from G. S. Brown, engineer; J. S. Ross, Recorder.

Paving, etc.—City of McAlester, Okla., will receive bids at City Hall, one copy to be filed with B. A. Enloe, Jr., Mayor, and one with J. M. Gannaway, City Clerk, until 10 A. M. July 5 to grade, pave, curb, gutter and drain South Main St. from south line of Sandy Creek Improvement to Comanche Ave. (Improvement district No. 14); improvement to consist of concrete pavement, six inches thick, concrete curbs and gutters; width, 30 feet between curbs; specifications on file with City Clerk; certified check 5 per cent. of bid.

Paving, Retaining Wall and Culvert.—Separate sealed proposals received by Board of Public Works, Paducah, Ky., until 10 A. M. July 1 for following work: Contract A, about 26,000 square feet sidewalks, 1850 square feet concrete driveways, 4900 feet concrete gutters; 5000 linear feet granite curbing, 200 linear feet cast-iron drain pipe; contract B, reinforced concrete retaining wall, about 750 cubic yards excavation, 350 cubic yards reinforced concrete, 23,000 pounds reinforcing steel, 55 feet gaspipe fence, 200 feet drain tile and pipe; contract C, reinforced concrete culvert, about 175 cubic yards excavation, 195 cubic yards reinforced concrete, 21,000 pounds reinforcing steel; \$50 certified check; L. A. Washington, City Engineer.

Paving, etc.—L. H. Baker, secretary-treasurer, Shreveport, La., receives bids until 10 A. M. June 25 for sidewalk paving and curbing during one year, estimated as follows: 50,000 square feet sidewalks, 20,000 linear feet curbing and 3000 cubic yards earth; certified check \$250.

Pencil-making Machinery.—L. B. Harris, 602 Equitable Bldg., Atlanta, Ga., wants addresses of manufacturers of pencil-making machinery.

Pipe.—Shelby County Commissioners, Courthouse, Memphis, Tenn., receive bids until 10 A. M. July 4 for drainage pipe of concrete, terra-cotta and metal, for sizes ranging from 12 to 48 inches in diameter, to be delivered in carload lots f. o. b. Union Railway and Old Raleigh Road switch; bidders requested to furnish specifications and tests on pipe for which bids are submitted; certified check \$500; H. M. McKay, chairman.

Pipe Specials.—Commissioners District of Columbia, Washington, D. C., receive bids until 2 P. M. July 8 to furnish and deliver 185 net tons cast-iron water pipe specials for Water Department; specifications and proposal forms obtainable from Purchasing Officer, D. C.

Pump.—A. C. Kefauver, Madisonville, Tenn., wants prices on deep-well pump.

Pumping Machinery.—Harvey T. D. Wilson, 1001 Union National Bank Bldg., Houston, Tex., wants addresses of manufac-

turers of pumping equipments, such as used for supplying water on direct pressure for fire-fighting, business districts, large cities.

Rails.—American Metallic Packing Co., Walnut and Clark Sts., Lexington, Ky., wants few miles good 30 to 40-pound steel re-lay rails, with splices; state lowest price, where can be inspected, and how many miles rails.

Rails.—Meridian & Memphis Railway Co., Meridian, Miss., wires Manufacturers Record: "We are ready to close contracts for 35 miles new 60-pound steel rail with fastenings; Meridian delivery; August to December shipments."

Rails, etc.—Proposals received at Bureau of Supplies and Accounts, Navy Department, Washington D. C., until 10 A. M. July 16, then publicly opened, to furnish at Navy-yard, Charleston, S. C., a quantity of steel rails, railroad ties and angle splice bars. Applications for proposals should refer to schedule No. 4652. Blank proposals furnished upon application to navy pay office, Charleston, S. C., or to bureau. T. J. Cowle, Paymaster-General, U. S. N.

Refrigerating Plant.—Mrs. Calvin S. Smith, 3982 Lake Ave., Chicago, Ill., is considering refrigeration for dwelling at Sarasota Bay, Fla.

Road Construction.—Blount County Pike Commissioners, T. F. Cooper, chairman, Maryville, Tenn., receive bids until 10 A. M. July 10 to construct three or four reinforced concrete bridges; certified check \$300; plans and specifications on file at engineer's office, Courthouse, Maryville.

Road Construction.—Bids received by Elmore County Commissioners at Courthouse at Wetumpka, Ala., at noon July 9 (not July 19 as recently stated) for grading and surfacing with gravel four miles State road; amount to be expended, \$8000; at same time will let \$8000 additional amount of the same class of work; profile and specifications on file with Probate Judge at Wetumpka; certified check \$400; W. S. Keller, State Highway Engineer, Montgomery, Ala.

Road Construction.—Mobile County Board of Revenue, Mobile, Ala., receives bids until noon July 11 to construct 10 miles of Cedar Point Rd.; work embraces clearing and grubbing, grading, surfacing with gravel and chert, drain pipe and concrete bridge and culvert work; plans and specifications on file with C. L. Strange, County Highway Engineer, Room 11 Bank of Mobile, or P. O. Box 945.

Road Construction.—Proposals for constructing macadam roadway at Back River disposal plant, sanitary contract No. 91, addressed to Board of Awards, received at office of City Register, City Hall, Baltimore, Md., until 11 A. M. July 3; plans on file in office of Calvin W. Hendrick, chief engineer of Sewerage Commission; specification and plans obtainable upon application at office of Sewerage Commission, 904 American Bldg.; charge of \$5 for each specification and blueprint; charge refunded upon return; certified check \$300; approximate quantities, 600 cubic yards excavation within limits of roadway; 1600 cubic yards borrow; 3100 square yards macadam; 675 square linear feet brick gutter.

Road Construction.—A. M. Glover, County Engineer, Fairmont, W. Va., wants preliminary correspondence with road-construction contractors.

Roofing.—See "Office Fixtures, etc."

Safe.—Oxford Bank, Oxford, Md., wants prices on safe.

Safe, etc.—United Building & Loan Co., Cheraw, S. C., wants prices on safe, vault and other bank fixtures.

Sawmill.—American Metallic Packing Co., Walnut and Clark Sts., Lexington, Ky., wants second-hand seven-foot band-saw mill complete with power; give description, price and where can be inspected.

Seating.—Mt. Zion Baptist Church, Rev. McD. Spencer, pastor, 522 W. Duffy St., Savannah, Ga., wants prices on seating for \$10,000 church.

Sewer Construction.—See "Paving, etc."

Sewer Construction.—A. N. Sloan, Department of Streets and Sewers, Chattanooga, Tenn., receives bids until 11 A. M. July 5 to construct brick main sewer on 17th, Cowart and Union Sts., including laterals on Main, Alabama and Market Sts.; blank proposal forms, contract and bond, with specifications, furnished on application to Department Streets and Sewers; applications for plans and specifications to be accompanied by deposit of \$5; certified check \$1000.

Sewer Construction.—City of Monroe, N. C., will receive proposals at office of P. H. Johnson, City Clerk, until 5 P. M. July

15 for construction of sanitary sewer system; plans and specifications now on file with City Clerk; Southern States Engineering Co., Memphis, Tenn., consulting engineer.

Sewer Construction.—City of Abingdon, Va., will receive sewer construction bids until 12 noon July 6; about 10 miles 6, 8, 10 and 12-inch salt-glazed vitrified-clay pipe; plans and specifications, etc., on file at Mayor's office or obtainable from Geo. F. Grant, chairman; Wm. Dunlop, engineer, Bristol, Tenn. (Recently noted.)

Sewer Construction.—Proposals addressed to Board of Awards, office of City Register, City Hall, Baltimore, Md., received until 11 A. M. July 3 for laying house-connections across footways in districts Nos. 23 and 30; plans on file in office of Calvin W. Hendrick, chief engineer of Sewerage Commission; specifications and plans obtainable upon application at office of Sewerage Commission, 904 American Building; charge of \$5 for each specification and blueprints; charge refunded upon return; certified check \$2300; approximate quantities, 19,800 linear feet 5-inch extra heavy cast-iron soil pipe; 25,150 linear feet 5-inch terra-cotta pipe; 15,650 linear feet 6-inch terra-cotta pipe; 4000 houses to be connected. Proposals until same time for building storm-water drains, storm-water contract No. 21; plans on file in office of Mr. Hendrick; plans, etc., obtainable; certified check \$3000; approximate quantities, 754 linear feet 7x51-inch masonry drain; 4510 linear feet 54 to 30-inch masonry drains; 11,365 linear feet 24 to 12-inch terra-cotta pipe drains; 6700 linear feet 18 to 12-inch inlet connections; 85 manholes; 223 inlets; 18 catch-basins; 240 spruce or pine piles.

Sewer Construction.—See "Water-works, etc."

Shears.—Brannon & Rogers, 202½ Main St., Houston, Tex., want second-hand foot-power gap shears for No. 18 and lighter.

Soap Machinery.—Eagle Liquid Soap Co., 1007 Monroe St., St. Louis, Mo., wants soap dispensers.

Skylights.—See "Office Fixtures, etc."

Steel Reservoirs.—International & Great Northern Railway Co., O. H. Crittenden, chief engineer, 1415 Carter Bldg., Houston, Tex., invites bids on construction of four steel crude oil reservoirs; one each at Taylor and Mart, Tex., and two at San Marcus, Tex.; capacity, 15,000, 10,000, 10,000 and 500 barrels, respectively.

Steam Shovel.—Pennsylvania Equipment Co., West End Trust Bldg., Philadelphia, Pa., wants one-man traction shovel to dig 100 tons clay per day.

Steel Angles, etc.—Proposals received at Bureau of Supplies and Accounts, Navy Department, Washington, D. C., until 10 A. M. July 16, then publicly opened, to furnish at Navy-yard, Norfolk, Va., a quantity of naval supplies as follows: Schedule 4657, boat chains; schedule 4658, steel angles and I beams. Applications for proposals should designate schedules desired by number. Blank proposals furnished upon application to navy pay office, Norfolk, Va., or to bureau. T. J. Cowie, Paymaster-General, U. S. N.

Steel, etc.—Proposals received at office of General Purchasing Officer, Isthmian Canal Commission, Washington, D. C., until 10.30 A. M. July 15, then publicly opened, for furnishing structural steel, rivets and wrought-iron or steel pipe. Blanks and general information relating to this circular (No. 717) may be obtained from this office or offices of assistant purchasing agents, 24 State St., New York; 614 Whitney-Central Bldg., New Orleans, and 1086 North Point St., San Francisco; also from United States Engineer offices in Seattle, Los Angeles, Baltimore, Philadelphia, Pittsburgh, Boston, Buffalo, Cleveland, Cincinnati, Chicago, St. Louis, Detroit, Milwaukee, St. Paul, Chattanooga, Louisville, Mobile and Galveston; Commercial Club, Kansas City, Mo.; Chamber of Commerce, Quincy, Ill., and Commercial Club, Tacoma. F. C. Boggs, Major, Corps of Engineers, U. S. A., General Purchasing Officer.

Store Fronts.—See "Office Fixtures, etc."

Textile Machinery.—Arnen & Roux, 141 Rue de Javel, 68 Rue de l'Eglise (XVe.), Paris, France, wants to correspond with manufacturers of machinery to make a certain kind of rough woven cotton fabric, with loose (or looped) edge; will furnish sample of goods.

Tobacco-pipe Machinery.—R. P. Johnson, Wytheville, Va., wants to correspond with manufacturers of machinery to make laurel root pipes from root to finished product.

Traction Engine.—Montgomery County Board of Revenue, Montgomery, Ala., receives bids until June 29 for traction engine to haul gravel and grade road; internal com-

bustion type; gasoline or kerosene burning; weigh not less than 14,000 pounds or more than 15,000 pounds; deliver 15 horse-power or more on draw bare pull; demonstration before payment; S. T. Westcott, clerk Board of Revenue.

Type Foundries.—See "Machinery."

Vacuum Cleaner.—See "Building Equipment."

Water Purification Plant.—Bids received at office of J. B. Winslett, City Secretary, Dallas, Tex., until 2 P. M. July 17 for construction of water purification plant at Turtle Creek pumping station; certified check for \$15,000; plans and specifications obtainable from Jas. H. Fuertes, 140 Nassau St., New York, or from City Secretary, on deposit of \$50.

Water-works, etc.—Town Commissioners, Carthage, N. C., receive bids until 2 P. M. July 16 to construct water-works and sewer system; specifications may be obtained from W. G. Jennings, secretary, and plans and maps on file with Mayor; certified check 10 per cent. of bid. Address bids to W. G. Jennings, secretary.

Water Gauge.—Old Virginia Orchard Co., Front Royal, Va., wants to correspond with manufacturers of automatic water gauge which (by ringing bell or otherwise) gives notice to engineer when water in boiler is too high or too low.

Well-drilling Equipment.—W. P. Chandler, Farmerville, La., wants prices on deep-well drilling outfit.

Well-drilling Machinery.—Newton County Oil, Gas & Mineral Co., D. L. Coley, president, Swain, Ark., wants prices on well-drilling machinery.

Wireworking Machinery.—Houston Fence and Crate Works, Box 1110, Houston, Tex., wants addresses of manufacturers of wire picket machines.

Woodworking Machinery.—W. H. Sykes, Box 85, Smithfield, Va., wants veneer machine for manufacturing truck packages, etc.

Woodworking Machinery.—Wm. M. Slaton, superintendent of schools, Courtland and Gilmer Sts., Atlanta, Ga., receives bids until 5 P. M. July 8 for woodworking machines for Technological High School; specifications mailed on application.

Woodworking Machinery.—See "Machinery Wanted."

Woodworking Machinery.—See "Tobacco-pipe Machinery."

National Gas Engine Association.

The National Gas Engine Association held a special meeting and exhibition in Milwaukee last week. In addition to the reports of committees the following papers were read:

"The Adaptability of the Large Gas Engine in the City," by H. W. Jones, People's Gas Light & Coke Co., Chicago, Ill.; "The Gas Producer and Its Economy," by J. N. Latta, Wisconsin Engine Co., Corliss, Wis.; "The Storage Battery in Isolated Lighting Plants," by Tallafiero Milton, Electric Storage Battery Co., Philadelphia, Pa.; "Electric Farm Lighting Systems: The Practical Features Which Appeal to the Farmer and Their Significance to the Gas Engine Dealer," by Otto Borchardt, Julius Andrae & Sons Co., Milwaukee; "Dirty Spark Plugs and Missed Explosions in the Sales Department," by Frank J. Whiteside, Atlanta, Ga.; "Something About Ignition," by H. E. Phillips, Dayton Engineering Co., Dayton, Ohio; "The Tractor" (illustrated by Moving Pictures), by L. W. Ellis, M. Rumely Company, La Porte, Ind.

One day was entirely devoted to matters of publicity, and papers on the following subjects were read and discussed: "Hit and Miss Publicity," "Publicity Through the Trade Journals and What It Means to the Manufacturer," "Essentials of Foreign Trade Development," "Direct Advertising to the Dealer" and "A General Publicity Campaign."

The exhibition of gas engines and accessories was held in Milwaukee's large auditorium, and among those exhibiting were the following:

Motsinger Device Manufacturing Co., Lafayette, Ind.
Nungesser Electric Battery Co., Cleveland, Ohio.
Knoblock-Heldman Company, South Bend, Ind.
Julius Andrae & Sons Company, Milwaukee, Wis.
Sumter Telephone Electric Co., Sumter, S. C.
Brownall Engine & Pulley Co., Lancaster, Mich.
Hercules Electric Co., Indianapolis, Ind.
Hendricks Novelty Co., Indianapolis, Ind.

Lavigne Manufacturing Co., Detroit, Mich.
G. D. Harris, Milwaukee, Wis.
Champion Ignition Co., Flint, Mich.
Racine Tool & Machine Co., Racine, Wis.
Havana Manufacturing Co., Havana, Ill.
J. H. Williams & Co., Brooklyn, N. Y.
Williams & Wolff, Milwaukee, Wis.
Kokomo Electric Co., Kokomo, Ind.
Sta-Rite Engine Co., La Crosse, Wis.
Wisconsin Engine Co., Corliss, Wis.
Christensen Engineering Co., Milwaukee, Wis.

Lauson-Lawton Co., De Pere, Wis.
Chas. White Gas Engine Co., Baltimore, Md.
Heer Engine Co., Portsmouth, Ohio.
J. I. Case T. M. Co., Racine, Wis.
Davis Manufacturing Co., Milwaukee, Wis.
Thodarsen Electric Co., Chicago, Ill.
Electric Storage Battery Co., Chicago, Ill.
Field-Brundage Company, Jackson, Mich.
Gilson Manufacturing Co., Port Washington, Wis.
The Erner & Hopkins Company, Columbus, Ohio.

Flikinger Iron Works, Bradford, Pa.
The Planhard Manufacturing Co., Kokomo, Ind.
The Marshalltown Motor Mat. Manufacturing Co., Marshalltown, Iowa.
Obenberger Drop Forge Co., Milwaukee, Wis.
Frost Engine Co., Evansville, Wis.
W. A. Jones Foundry & Machine Co., Chicago, Ill.

J. Thompson Foundry & Machine Co., Beloit, Wis.

Wisconsin Machinery & Manufacturing Co., Milwaukee, Wis.
Standard Cream Separator Co., Milwaukee, Wis.

Gile Boat & Engine Co., Ludington, Wis.
John Lauson Company, New Holstein, Wis.
Witherbee Ignitor Co., Springfield, Mass.
Brown Clutch Co., Sandusky, Ohio.
L. C. Kuhnert, Jr., Company, Chicago, Ill.
Rock Island Battery Co., Cincinnati, Ohio.
International Gas Engine Co., Cudahy, Wis.
International Acheson Graphite Co., Niagara Falls, N. Y.

Dayton Electric Engineering Co., Dayton, Ohio.
Turner Manufacturing Co., Port Washington, Wis.

Falk Company, Milwaukee, Wis.
National Carbon Co., Cleveland, Ohio.
Pfanzelt Electric Laboratory, North Chicago, Ill.

Lenke Electric Co., Milwaukee, Wis.
Lunkenheimer Company, Cincinnati, Ohio.
Minster Machine Co., Minster, Ohio.
W. & B. Douglass, Middletown, Conn.
Raymond Manufacturing Co., Corry, Pa.
O. K. Clutch Machinery Co., Indianapolis, Ind.

American Electric Works, Chicago, Ill.
Madison Klipp Lubricator Co., Madison, Wis.
Ph. Gross Hardware Co., Milwaukee, Wis.

INDUSTRIAL NEWS OF INTEREST

Worsteds Mills for Sale.

The auction sale of the Ashtabula (Ohio) Worsteds Mills, to take place on July 15, 1912, at 1 P. M., is noted in our advertising columns. Any additional information desired may be obtained by addressing W. H. Morrison, trustee, 55 Center St., Ashtabula, Ohio.

Allen Engineering Co.'s Contract.

The Duck River Power Co., Shelbyville, Tenn., will practically double its capacity, and has placed a contract through the Allen Engineering Co., Memphis, for Chuse engines to be operated in connection with its present water-power equipment. The Chuse engine is manufactured by the Chuse Engine & Manufacturing Co., Mattoon, Ill.

American Pulverizer Co.'s New Offices

In order to more readily care for the details pertaining to the manufacture of its pulverizers and other machinery, the American Pulverizer Co. has changed the location of its offices from the Mermod-Jaccard Bldg., St. Louis, to its factory, 31st and Ridge St., East St. Louis, Ill. This company manufactures pulverizers, revolving screens, air separators, etc.

Removal of Chemical Laboratories.

Dr. Charles F. McKenna, consulting chemist and chemical engineer, has removed his laboratories, formerly at 221 Pearl St., New York, to 59 Church St. They occupy a commodious and especially designed suite of rooms on the top floor of this building, where they have been enlarged as research and testing laboratories and are combined with his office.

Change of Philadelphia Offices.

The Acme Knitting Machine & Needle Co., with main office and works at Franklin, N. H., has changed its Philadelphia offices from the Knickerbocker Bldg. to the Bourse Bldg. This company manufactures "Acme" and "Hemphill" automatic seamless hosiery knitting machines, latch needles, etc. A. W. Sullivan is president of the company and W. F. Duffy is treasurer.

Form Partnership in Architecture.

Marshall J. Smith, architect and engineer, Atlanta, Ga., with associates in New York City, Washington, Birmingham and New Orleans, has formed a partnership with Warren C. Powell to conduct the practice of architecture under the firm name of Marshall J. Smith & Warren C. Powell, architects, 657 Candler Bldg. Annex, Atlanta. Catalogues and trade samples will be gladly received by the new firm.

Contracts for Brick Work.

Among the contracts received recently for brick work by E. A. Curry, 1803 Hewitt Ave., Cincinnati, are those for five residences in Evanston, Ind.; a 300-foot warehouse for the Sabin, Robbins Paper Co., Middletown, O.; a three-story store with enameled brick front for Anton Froelicher, Cincinnati; a six-story warehouse for the Union Distilling Co., Carthage, Cincinnati; a 10-story warehouse for the Greendale Distillery,

Lawrenceburg, Ind., and a bungalow for E. A. Curry, Cincinnati. A total requirement of 2,000,000 bricks is made by his contracts for the past two weeks.

Grade for Electric Railway for Sale.

The graded roadbed for the Mercer Electric Railway from Princeton to Athens, W. Va., is offered for sale in our advertising columns. This roadbed and grade has been completed for nearly the entire distance, and it is stated that it will be sold at a bargain. John Lilly of Athens, secretary of the Mercer Electric Railroad Co., will give all information desired on request.

Standard Plunger Elevator Co.

In taking on new lines of elevator machinery and equipment the Standard Plunger Elevator Co., 115 Broadway, New York, has secured offices for its Washington branch in the Corcoran Bldg. In the place of its former offices in the Builders' Exchange. This company builds improved direct acting plunger hydraulic passenger and freight elevators of any travel, speed or capacity required. The works are located at Worcester, Mass. W. Godfrey Boyd is the manager of the Washington office.

Contracts for Gas Machines.

A Twentieth Century gas machine has been installed in the Mare Island Navy-yard, Vallejo, Cal., and a contract has been awarded for the installation of a similar gas-making machine for the U. S. Navy-yard at Bremerton, Wash., on Puget Sound. The latter apparatus has been shipped and will be installed at once on arrival at destination. These machines are manufactured by the C. M. Kemp Manufacturing Co. of Baltimore. This company has also been awarded contract for three Twentieth Century gas machines by the Dominion Cannery, Ltd., Hamilton, Ont.

Atlantic Fireproof Construction Co.

A branch of the Atlantic Fireproof Construction Co., with main offices at 527 Fifth Ave., New York, has been established in the Equitable Bldg., Atlanta. This company erects new buildings and finances their construction when required. The officers of the new company are J. S. B. Thompson, president, New York; F. L. Seeley, first vice-president, Atlanta; Wm. F. Seeley, second vice-president, New York, and Chas. Lordans, secretary-treasurer, Atlanta. It has several contracts in view and expects to do an extensive business through its Atlanta branch for the Southern States.

Factory Buildings and Site for Sale.

Factory property consisting of a frame building 125x80 feet, with 30 skylights; two two-and-a-half-story frame buildings 60x30 feet, with elevator in each; four acres of land, situated on the main line of the railroad, is offered for sale in our advertising columns. This plant is suitable for furniture or wagon factory and for stepladder and wheelbarrow manufacturing. Gum, poplar, oak and pine timber are close at hand. A 50-horse-power engine and 60-horse-power boiler may also be furnished. Any other in-

formation required may be obtained by addressing I. I. Strauss, Sumter, S. C.

Georgia Gravel Deposits.

It is reported that the gravel deposits at Kramer, Wilcox county, Georgia, will shortly be actively worked and that the material has been given a thorough test with satisfactory results. A sample sent to the Department of the Interior for examination was classified as granite suitable for road material. This deposit is said to contain millions of tons, and its output will solve the problem formerly existing in the southern portion of Georgia as to the production of a suitable and economical paving for roads in that section. R. W. Durden of Brunswick, Ga., will be in charge of the operations of the gravel pits.

To Open Jacksonville Branch.

It has been decided by the Cameron & Barclay Company of Tampa, Fla., dealers in machinery, phosphate, plumbing and mill supplies, to open a branch store at Jacksonville in addition to the stores which it now operates at Tampa and Charleston. The Jacksonville branch will carry a stock amounting to about \$70,000 of mill supplies and machinery, also a stock of plumbers' supplies for the jobbing trade. This company's Tampa branch was established four years ago and has built up a large business. Under the present plan the northern part of the State of Florida and South Georgia will be subsidiary to the Jacksonville branch, while North and South Carolina and the northern part of Georgia will be supplied from the Charleston store.

Cement Barges in Mobile Harbor.

A cement barge 85 feet long, 35 feet beam and drawing 22 inches was recently launched from the ways of the Southern Dredging Co., on Blakeley Island, Mobile River, opposite Mobile, for the Cement Boat Co. of Mobile. This company was organized by Dr. Henry Goldthwaite, and the barge is the first vessel constructed by the company, for which S. Volti is the superintending constructor. The barge is built entirely of metal and cement, the construction being such that one complete monolith is formed. The advantage of this type of boat is that it will not rust and is not subject to the attacks of the teredo, which is so destructive to wooden vessels in Southern waters unless protected under water by proper sheathing or protective paint. Dr. Goldthwaite is president and treasurer of the Cement Boat Co.

A New Tennessee Marble Co.

The incorporation of the Conservation Marble Co. of Lenoir City, Tenn., begins another new industry which will attract attention to the marble business of that section. The quarry produces a high grade light gray and light pink marble for exterior work, and dark pink and other colors to be used for interior decorations. Besides shipping dimension stone this company proposes to conserve its waste material for use in high-grade macadam road building, also for ground marble to be used with fertilizers and marble flour for the manufacture of cold-water paint and putty. By this means the entire product of the quarry will be utilized. The company is now making plans for the installation of a complete electrical quarrying outfit, which will be the second in this section of the State, and which will be modern in all respects.

Ambursen Earth Dams.

Advances made in the construction of earth dams as a result of the special study and varied experience in the construction of earth-filled dams have resulted in a special form of dam with hollow core wall, as designed and built by the Ambursen Hydraulic Construction Co., 88 Pearl St., Boston, and 111 Broadway, New York. The hollow core wall is built of reinforced concrete, using a system of slip forms which admit of rapid and economical construction. This form of construction is described and much information regarding earth-filled and composite dams is included in a pamphlet just issued by the Ambursen company. The text is well illustrated by diagrams and also by views of dams built of this type, and also illustrations of other types of dams which have failed in recent years. This pamphlet will be sent to interested persons on request.

Western Electric Expansion in the South.

In order to handle more effectively its growing business in the South and Southwest the Western Electric Co., 463 West St., New York, has opened a large warehouse and branch office at Houston, Tex. The company states that this move is a recognition of Houston's position as a shipping point

and center for buyers of electrical goods. A fact which makes it possible to give excellent service throughout its territory is that several of the South's largest railroads enter the city. This new office will be operated as a branch of the Dallas organization under the supervision of R. W. Van Valkenburgh, manager, and Paul Joyslin, sales manager. The Houston office will have H. P. Hess in charge of sales, F. G. Caldwell in charge of store, and M. A. Schon in charge of warehouses. Complete stocks of telephone, tower, supply and line material are carried.

Anderson Oil Expellers.

As an indication of the steadily increasing use of Anderson oil expellers throughout the South an unusually large number of sales have been made during the past season. Among the mills which have been more recently built by the Burruss Engineering Co., oil-mill builders, Atlanta, Ga., and equipped with the Anderson oil expellers are the following: The Farmers' Feed Fertilizer & Gin Co., Florence, Ala.; Plinkard (Ala.) Oil & Manufacturing Co.; Madrid (Ala.) Cotton Oil Co.; Enola (Ark.) Cotton Oil Co.; Coffee (Ga.) Oil Mill Co.; August Zoeller, Kiowa, Okla.; A. B. & T. I. Brown, Carnegie, Okla.; Durant Cotton Oil Co., Caddo, Okla.; People's Ice & Manufacturing Co., Brownsville, Tex.; Gilmer (Tex.) Cotton Oil Co.; Imperial Mercantile Co., Sugarland, Tex.; Charles Hillman, Telfer, Tex.; Teague (Tex.) Cotton Oil Co.; Nacona (Tex.) Cotton Oil Co.; and the Planters' Cotton Oil Co., Navasota, Tex. The Burruss Engineering Co. is the sales agent for the Anderson expeller for the Atlanta territory, and the Western Engineering Co., Dallas, Tex., is the agent for Texas and Oklahoma. Each Anderson oil expeller is a unit in itself, so that to increase the equipment it is only necessary to install additional units. Full information regarding its use and advantages will be furnished on request to the company.

TRADE LITERATURE.

Bauer Bros. Co.'s Catalogue.

The Bauer Bros. Company of Springfield, O., has issued its 1912 catalogue consisting of 48 pages, fully illustrated and containing descriptions of its "Scientific" disc hullers, beaters and separators. One of the illustrations shows an installation of the machinery. This catalogue will prove of particular value to persons interested in the products of this company.

To Build Transmission Line.

The Lawrence County Water, Light & Cold-Storage Co. of Aurora, Mo., will discontinue its steam pumping plant at Verona, Mo., and replace it with electric-driven pumps. These pumps will be operated from the plant at Aurora and an electric transmission line will be run between the two places, a distance of five miles. W. S. Merkle, New Bank of Commerce Bldg., St. Louis, Mo., is the consulting engineer.

Apollo Best Bloom Reference Book.

A small leather-bound reference-book, containing data and information relative to the products of the American Sheet & Tin Plate Co., Pittsburgh, Pa., has been issued for distribution by the company. This company manufactures sheet and tin mill products, and is well known through its Apollo best bloom, genuine charcoal hammered iron, Apollo roofing and other trade-marks. Various products of the company are illustrated and briefly described in this reference book. Tables of sizes and weights are also included.

E. & G. Brooke Iron Co.

A folder giving information and stating "Facts" regarding the iron cut nail industry has been issued by the E. & G. Brooke Iron Co., Birdsboro, Pa. This company manufactures Anchor Brand iron and steel cut nails, both black and galvanized; muck bars, scrap bars, skelp iron, tack plates; basic, foundry and gray forge pig iron. The company was established in 1837 and was incorporated in 1880. A summary of the results of a test of cut and wire nails made on the Government's testing machine at the United States Arsenal, Watertown, Mass., is given; also price list of the various sizes and types.

National Stoves and Ranges.

The various styles of National heating stoves, base burners, ranges, fire boxes for wood and coal fuel; the Excelsior line of steel and cast-iron furnaces, also gas and gasoline stoves, blue flame oil stoves and hardware specialties, manufactured by the Excelsior Stove & Manufacturing Co. of Quincy, Ill., are described and illustrated in a large 265-page catalogue, No. 27, for 1912.

1913. This company has branches in Oklahoma City and St. Paul. Special catalogues are also issued by this company, showing its line of refrigerators, ice chests, gas and gasoline and oil stoves, and other specialties.

Engberg Generating Sets.

The advantages and economy of individual generating sets for supplying electrical current are stated in the folder issued by Engberg's Electric & Mechanical Works, Vine St., St. Joseph, Mich. Several illustrations of the Engberg direct connected generating sets from 2½ to 50 K. W., steam operated, are shown; also belted type dynamo, Engberg electro-hydraulic valves designed for water-works systems, which may be shut off by the engineer at the pumping station without going to the sand pipe or reservoir. The importance of this means of operating the valves is thoroughly understood by fire department officials and water-works superintendents. This company manufactures in addition to these steam operated generating sets, gasoline operated direct connected generating sets, steam engines, searchlights, switchboards and electro-hydraulic valves.

Two New Inventions.

Applications for patents have just been filed by C. L. Nash, Big Stone Gap, Va., for a ribbon holder and a window-envelope machine. The first of these inventions is described as the "extra typewriter ribbon holder," by means of which portable extra ribbons of any desired kind or color, different from the ribbon in the machine, may be used without changing or molesting the ribbon already in the machine, and it may be fitted to any visible typewriter in the slit between the cylinder and the regular ribbon, or it can be used even more simply with non-visible machines. The window-envelope machine is designed to make ordinary envelopes adaptable for "window addressing," irrespective of the size or shape. It cuts the opening anywhere desired on any size of manufactured envelope, through which to display the address on the enclosure. It also enables the punching of government stamped envelopes. It is hand-operated, light and durable, and is placed on the desk

conveniently at hand. Envelopes in which "window" openings have been made by this machine are easily converted into "out-look" envelopes if preferred by inserting the glassine paper, which is furnished by printers cut to sizes. A folder describing these two inventions may be obtained by addressing the inventor.

Lidgerwood Cableways.

The extensive use of Lidgerwood cableways for hoisting and conveying purposes is shown in the numerous illustrations included in Bulletin No. 31, issued by the Lidgerwood Manufacturing Co., 26 Liberty St., N. Y., describing the use of cableways for important engineering work. This book is devoted to their use for lock and dam work, and forms one of a series of bulletins in which the many uses of these cableways are described. The Panama type of high-speed cableway, which was designed especially to meet the rigid requirements of the Isthmian Canal engineers, is fully illustrated and described. The cableways for building the Gatun Locks were required to develop a carriage speed of 1800 feet per minute, which is double that of former practice. This condition was met with such success that the cableways have shown 99 per cent efficiency for long periods. Illustrations are included in the book showing the building of many of the most important engineering works in the world, the part which was taken by the Lidgerwood cableways being particularly noticeable. These include the Gatun Locks, which required 2,000,000 cubic yards of concrete in their construction; the Great Ashokan Dam; the Medina Dam, on the Medina River, about 35 miles west of San Antonio, Tex.; the Pathfinder, Shoshone and Roosevelt Dams; the Blewett Falls Dam, across the Yadkin River, in North Carolina; the U. S. Lock and Dam No. 11, on the Kentucky River; the improvement works at the Falls of the Ohio River, at Louisville, Ky.; the Locks of the Warrior and Tombigbee Rivers, built under supervision of the United States Engineering Corps, and many others. This book and its contents will form a valuable addition to any technical library.

MOTOR VEHICLES AND TRACTORS.

International Motor Co.'s Contract.

The International Motor Co., Broadway and 57th St., New York, has been awarded the contract for five two-ton chassis, mounting combination hose and pumping engine bodies for the suburban service of the New York Fire Department. They will be of the Mack type and are to be delivered in four months from the date of the order. This contract was awarded in competition with other leading makes of truck and fire apparatus.

Hotel Motor Bus in Greenville, S. C.

Appreciating the value of motor omnibus service in transporting its guests, baggage, etc., between the hotel and the depots, the management of the Attaray Hotel, Greenville, S. C., uses a "Grabowsky" 35 horsepower motor bus made by the Grabowsky Power Wagon Co. of Detroit. It will accommodate 14 passengers and is fitted up with electric lights. It has been in use for six months and has given entire satisfaction both to the patrons and the owners. This is an illustration of the many uses to which motor vehicles are being applied in the South, and is an indication of the rapid development which may be expected with the continued increase and interest in good road-building.

New Stevens-Duryea Factory.

Waterproof floors to prevent not only leakage, but the penetration of even dampness, and dustproof construction throughout are two of the unusual features which mark the new Stevens-Duryea automobile factory at East Springfield, Mass., as a development of modern factory building. When completed the plant will be one of the finest industrial establishments of its kind. The buildings of the new plant are all to be large in ground area, but restricted in height, to save lifting and lowering partly finished cars. The first of the brick and steel structures into which the company is moving is 508 feet long, with a frontage of 80 feet on the broad boulevard which is one boundary of the forty-acre tract the plant will occupy. It is only four stories high, but each floor having an area of 40,000 square feet of available space, this one building gives as much working room as many good-sized factories have all told. The expansion of the Stevens-Duryea Company has been along rather conservative lines.

The policy has been not to branch out until automobile standards became settled, and the concern was satisfied with a plant of moderate capacity while it was bringing out the six-cylinder motor, and the peculiarities of construction which it originated, but which have since become fundamental in fine cars. It is proposed in the new plant to greatly enlarge the company's body-building facilities, installing high-pressure hydraulic presses, to make interchangeable parts of bodies so that they can be standardized. The design and construction of Stevens-Duryea cars are still under the direct supervision of J. Frank Duryea, who has been the designer from the beginning, and who is now vice-president of the Stevens-Duryea Company. Among the 1500 employees now in the company's service are several who assisted in building the pioneer Duryea motor wagons.

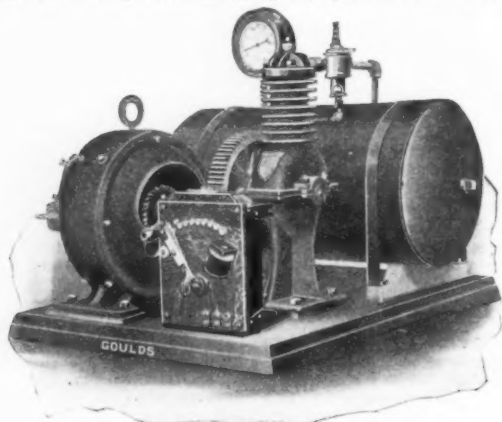
St. Louis an Ideal for Motor Cars.

"St. Louis is an ideal city in which to build and test motor cars," said President J. W. Moon of the Moon Motor Car Co. The Mound City has climatic conditions that are nearly perfect for the purpose. Mild winters allow the road tests to be made practically every day in the year. It is interesting to see the cars to be tested start out on their long, gruelling trips. Mr. Moon's description of a recent test presents the features in the following striking manner: "The immense elevator brought the cars down from the factory testing-room. They had just been put through their four-day factory test. One day the motors were run on the blocks by factory power, another 24 hours under their own power by gasoline, then the assembled chassis were tested by factory power, and the fourth or final day by gasoline under their own power. They looked like racers, the stripped steel bodies, low slung, long and rakish, with big powerful motors fully exposed to view. After lining up for critical inspection they shot away at one-minute intervals on their strenuous four-day road test. Around the corner from the factory they swung into high gear and went racing up Blisset Hill with its 12 per cent. grade, a quarter of a mile long and 200 feet high. Mere specks they appeared to us as they mounted the summit of the hill. Then away they headed north towards the Columbia Bottom road, where they would have to

plow through the stiffest stretches of sand imaginable, and along river-bottom lands, up hill and down, where "roadability" would get a severe workout. The next day the stripped chassis were sent out south of St. Louis for about 100 miles along the natural speedway, always climbing, till they reached the world-famous Iron Mountains, Pilot Knob, Arcadia, and finally the Arcadia Country Club, high up in the rugged Ozark Mountains. Only after the cars pass the thorough four-day factory and four-day road tests does President Moon give his final approval. In this way the big Moon motor cars have earned their title as "The Character Car."

Garage Air Compressor Outfits.

The Goulds Manufacturing Co. of Seneca Falls, N. Y., has just placed on the market a complete air compressor outfit for garage service. This outfit consists of a Goulds air-pressure pump mounted on a substantial iron base, with driving motor, starter and air-storage tank as shown in the accompanying illustration. The driving motor has an



GOULDS AIR COMPRESSOR FOR GARAGES.

output of one horse-power and the pump used has a capacity of 1.27 cubic feet of free air per minute when operated at 150 revolutions per minute. It is very compact and entirely self-contained. With a tank 23 inches long by 14 inches in diameter, with a capacity of 3½ cubic feet of air at 150 pounds pressure, the over-all dimensions of the base are only 30x30 inches. Tanks of larger or smaller capacity may be furnished as desired.

The Russell Gas Tractor.

In our issue of May 23, describing the work of the Parmley & Nethercut Co. in their work at Fort Worth, Tex., on the new auxiliary water-works system, mention was made of the Russell gas tractor, with cars, which have been contracted for to be used in hauling the concrete water main from the pipe-making plant to the trenches. This tractor is manufactured by The Russell & Co., Massillon, O. It has since been delivered, and is shown in the accompanying illustration hauling three loaded flat cars con-

friction to a minimum. The motors are of two types, three-cylinder and four-cylinder, vertical, water-cooled and develop as high as 80 horse-power. The Russell tractor is a combination of internal combustion engine, transmission, frame and road wheels arranged with the definite object in view of hauling a maximum load with a minimum of expenditure of fuel and time. This company has been actively dealing with traction problems since 1842, and has grown up with the demand ever increasing for power to take the place of horses on the farm as well as on the road. If needed, the Russell tractor with addition of a couple of headlights may be run for 24 hours in two shifts in those sections where the plowing season is short, the arguments in favor of gas tractors are particularly strong. For extensive hauling by contractors, mine owners, mill men and others, the advantages of these tractors are apparent. They may be used for hauling loads to market, ore from mines, logs to sawmills, plowing, etc. Steam traction engines, hauling engines, portable, and stationary engines,

threshers and sawmills are also manufactured by this company. A Southern branch is located at Louisville, Ky.

Amplex Motor Car Co.

One of the important recent announcements in the automobile industry is to the effect that W. J. Mead is to retire from the management of the Olds Motor Works, at Lansing, to become president and general manager of the Amplex Motor Car Co. of Mishawaka, Ind., successor to the Simplex Motor Car Co. Mr. Mead is one of the prominent men in the industry. Always a close student of popular demands, he has, in the three years in which he has been affiliated with the company, built up the Oldsmobile business to proportions which places the Olds Motor Works among the very foremost of the high-grade car manufacturers and stamps it as one of the strongest of the constituent companies of the General Motors Co. In addition to his duties as vice-president and general manager of the Olds Motor Works, Mr. Mead has been

car being in the motors. It is predicted that a bright future is assured for the Amplex car under Mr. Mead's direction. In taking up his new duties at the head of the Amplex organization, he will have under his direction a plant which is up to date in every respect, and which is equipped with every modern device in use in automobile manufacturing. The sales offices will be entirely separate from the factories, as he plans to have offices in Chicago for this part of the business. Special attention will be given to the service departments, so that all owners of Amplex cars manufactured during previous seasons may secure sufficient co-operation in this respect.

Remarkable Run of the Schacht Car.

For many thousands of Americans who want to purchase automobiles at a low price, one of the most interesting developments of the Indianapolis Speedway Race on Decoration Day was the showing made by a Schacht car. Here was a car practically unknown in the racing field of big events, weighing approximately 400 pounds, which for consistent performance, for steady work, swiftness of pace, was scarcely outdone by any car in the race, regardless of price, power, weight or any other consideration. That the Schacht finished fifth in the long list of the picked machines of the world is enough to place it among the most desirable cars built for the price. It has strengthened its place in the confidence and esteem of the motor public immeasurably by this performance. Only one Schacht started, and one Schacht finished, and one Schacht was in the race and in the eyes of the watchers every minute. The time for the 500 miles gave an average of 73.8 miles per hour. And at the finish the Schacht was "as good as new"—not a bolt or a nut loose. This means a great deal to the general public as well as to motorists, because no car of such low price has ever before won such a victory in such company. The natural inference is that "if the Schacht can do this, it is good enough for me." That is the idea that will occur to many who have thought they would wait for a car until they could pay the high price. Furthermore, it is a promise of even better things among the lower-priced cars in the future. The Schacht will not go back, and in setting this precedent it will spur all the lower-priced cars to greater effort. The Schacht is manufactured by the Schacht Motor Car Co. at Cincinnati, it having been in the motor car building business for 11 years. Its line of pleasure cars includes two handsome roadsters, two types of five-passenger touring cars and the new eight-passenger touring car built with an entirely new seating arrangement. One to five-ton power trucks are also manufactured by the Schacht company. Those well informed have previously had a wholesome respect for the Schacht, but few expected quite as much as the Schacht gave in that race. The company is receiving congratulations from many sources on the excellent performance, including reliability as well as speed, shown in the race.

ATLANTIC DEEPER WATERWAYS.

Official Call for the Fifth Convention of the Association.

In his formal call for the fifth convention of the Atlantic Deeper Waterways Association at New London, Conn., September 4-6, the president, Congressman J. Hampton Moore, says:

"New London is particularly interested in the completion of the Atlantic intra-coastal waterway. At the entrance to Long Island Sound, and yet on the safe side of Point Judith, it is a natural distributing point for a large part of New England. Blessed with a matchless harbor, served by competing railways, and about to expend a State appropriation of \$1,000,000 on public port terminals, it is indeed a bright star in our galaxy, and one that lights us toward our goal. This convention marks a turning-point in the course of the Atlantic Deeper Waterways Association. Five years ago we sketched out a project for inland water communication from New England below Cape Hatteras. Then our Southern brethren joined hands with us to extend the plan to Florida waters. A toll of 2200 human lives and \$40,000,000 of property, lost in one decade on our stormy coast, was surely sufficient reason for our agitation for

more economical facilities of transportation. Step by step we have proceeded; Congress listened to our call and authorized a survey by army engineers; their report has been submitted, and is, in the main, favorable to our project. Congress has provided funds for the completion of one link in our chain, is now arranging for the next link northward, and holds out hope of further progress northward at another session.

"We are now fairly under way; our ultimate success depends on our own unremitting persistence. To reverse the watchword of a national body interested in waterway improvement, we are no longer concerned about a policy; we are outgrown that stage; we are urging the completion of a project which we have proven practical. What it means to the Atlantic seaboard in the cheap and rapid handling of heavy freight, in the better distribution of the necessities of life, in the better equipment of our industries to compete in the trade of the world, we can here only suggest. The many resolutions, publications and proceedings of this association, by the most eminent authorities, will supply the proofs."

The officers of the association are:

J. Hampton Moore, Pennsylvania, president.

Charles M. Stewart, Maine; Frederick H. Babbitt, Vermont; O. L. Frisbee, New Hampshire; A. Homer Skinner, Massachusetts; Lyons Delany, Rhode Island; Edward H. Warner, Connecticut; Joseph A. Goulden, New York; Frederick W. Donnelly, New Jersey; Charles Heber Clark, Pennsylvania; Hiram R. Burton, Delaware; Joseph C. Whitney, Maryland; Harvey M. Dickson, Virginia; D. M. Jones, North Carolina; W. D. Morgan, South Carolina; Pleasant A. Stovall, Georgia, and George F. Miles, Florida, vice-presidents.

Frank E. Howe, Vermont; Frank Fessenden Crane, Massachusetts; Fred. E. Halliday, Jr., Rhode Island; E. E. Durant, Connecticut; Wm. T. Donnelly, New York; William J. Bradley, New Jersey; Frank D. La Lanne, Pennsylvania; William H. Heald, Delaware; William W. Cator, Maryland; T. M. Carrington, Virginia; Frank Wood, North Carolina; R. G. Rhett, South Carolina; Joseph F. Gray, Georgia, and Charles M. Cooper, Florida, delegates.

Wilfred H. Schoff, Pennsylvania, secretary-treasurer pro tem.

Durell Shuster, Pennsylvania, assistant secretary.

Cultivating Delta Land.

The Egypt Planting Co. has been incorporated with \$1,000,000 capital stock by J. S. and J. R. Watson of Lexington, Miss., and G. L. Hawkins of Hattiesburg, Miss. It wires the MANUFACTURERS RECORD as follows:

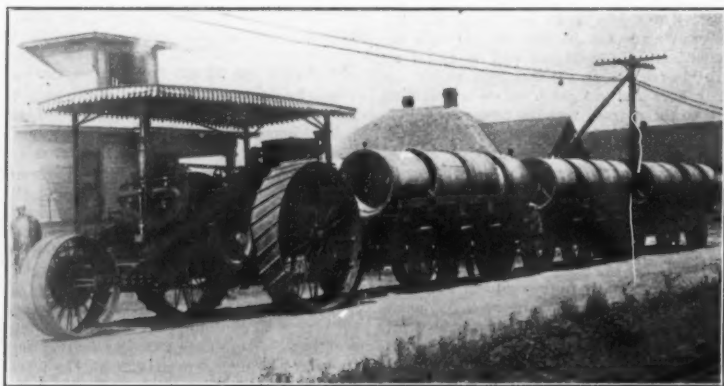
"Acreage, 5400; three-mile front on Yazoo River; 3000 acres in cultivation; estimated cost, \$50,000 for tilling and other improvements; all farm land."

For Southern Sugar Refinery.

Arbuckle Bros. of New York are said to be planning the construction of a sugar refinery with a daily capacity of 3000 barrels at Norfolk or New Orleans or Baltimore, with Norfolk preferred as the location. They wire the MANUFACTURERS RECORD as follows:

"We have no details to furnish at the present time."

The Utilities Commission of Port Arthur, Tex., has published a report unanimously in favor of the municipal ownership of the water-works and sewers.



THE RUSSELL GAS TRACTOR AT FORT WORTH, TEX.

hauled 24 pipes, each 36 inches in diameter and 4 feet long. The flat car trucks were made by the Avery Company, Peoria, Ill. In the design of this tractor, the company has profited by its long experience in the production of steam tractors. The frame is of heavy-weight Carnegie steel channels riveted and braced to withstand excessive strains. Gears are of unusual size and strength, and made of best steel castings. The power is transmitted by latest type leather-faced cone clutch, which is easily manipulated, and ball thrust bearings are used at both ends of clutch sleeve, reducing

one of the vice-presidents of the General Motors Co. The Amplex Motor Car Co. represents the reorganization of the Simplex Co., and while the name of the company has been changed, Mr. Mead states that the product will still be styled the Amplex car. The Amplex chassis is to be fitted with two types of motors, a six-cylinder, longstroke, four-cycle, poppet valve motor of standard size, and a four-cylinder, latest style Knight motor, this latter in a limited number only to supply the demand for this particular type. The chassis will be manufactured practically as heretofore, the changes in the

FINANCIAL NEWS

The MANUFACTURERS RECORD invites information about Southern financial matters, items of news about new institutions, dividends declared, securities to be issued, openings for new banks, and general discussions of financial subjects bearing upon Southern matters.

Review of the Baltimore Market.

Office MANUFACTURERS RECORD,

Baltimore, Md., June 26.

The Baltimore stock market was dull during the past week. In the trading United Railways common sold from 24 1/2 to 25; do. incomes, 65 to 65 1/2; do. funding 5s, 89 1/2 to 89; do. notes, 101 to 102; do. 4s, 85 to 84 1/2; Consolidated Gas, Electric Light & Power 4 1/2s, 90; do. notes, 100; Consolidated Gas 4 1/2s, 98; Seaboard Air Line common, 25; do. preferred, 54 1/2; Seaboard 4s, stamped, 87 1/2; Mt. Vernon-Woodberry Cotton Duck 5s, 74 to 74 1/2; G.-B.-S. Brewing common, 5; do. incomes, 15; do. 4s, 51 1/2 to 52.

Bank stock sold as follows: Western, 37 1/2; Merchants', 185; Union, 133; Bank of Baltimore, 165; First National, 135; Mechanics', 297 1/2. United States Fidelity sold at 185; Maryland Trust common, 110; Fidelity & Deposit, 151 1/2 to 151 1/2; Continental Trust, 224.

Other securities were traded in thus: Seaboard & Roanoke 5s, 105 1/4; Western North Carolina 6s, 102 1/2; Charleston Consolidated Electric 5s, 96 1/4; Fairmont & Clarksburg Traction 5s, 100; Houston oil common, trust certificates, 14 1/2 to 15; do. preferred, trust certificates, 68 to 70; do. dividend certificates, 85 1/2; Lexington Railway 5s, 94 1/4; Macon Railway & Light 5s, 100 1/2; Milwaukee Refunding 4 1/2s, 95; Norfolk Railway & Light common, 28 1/2; do. 5s, 99 1/2 to 100; Norfolk & Portsmouth Traction 5s, 89 1/2; Augusta & Aiken preferred, 82; Anacostia & Potomac 5s, guaranteed, 102 1/2; Baltimore Electric 5s, stamped, 98 1/2 to 98 1/2; Florida Southern 4s, 92 1/2; Georgia & Florida preferred, 12; Maryland Electric 5s, 98 1/2 to 98 1/2; Central Railway extension 5s, 106; do. construction 5s, 106; Columbia & Greenville 6s, 105; Georgia, Carolina & Northern 5s, 105 1/2; Augusta Terminal 6s, 115; Anacostia & Potomac 5s, 99 1/2 to 100; Chicago Railways 5s, 100 to 100 1/4; Indianapolis & Northern Traction 5s, 86 1/2; New Orleans, Mobile & Chicago 5s, 90 1/4; City & Suburban (Baltimore) 5s, 104 1/2; Macon, Dublin & Savannah 5s, 100; Pullman Ventilator common, 26; do. preferred, 90 1/2; Atlantic Coast Line convertible debenture 4s, 103 to 103 1/4; Baltimore Electric preferred, 44; Consolidation Coal refunding 5s, 93 1/2 to 93 1/4; Georgia & Alabama Consolidated 5s, 106; International & Great Northern Corporation, 56; Maryland Electric 5s, 98 1/2; Jamison Coal & Coke, George's Creek 5s, 92 1/2; Mobile & Birmingham 4s, 79 1/2.

SECURITIES AT BALTIMORE.

Last Quotations for the Week Ended June 26, 1912.

Railroad Stocks.	Par.	Bid.	Asked
Atlantic Coast Line.....	100	139	143
Atlantic Coast of Conn.....	100	238	255
Georgia Sou. & Fla. 1st Pfd.....	100	85	88
Georgia Sou. & Fla. 2d Pfd.....	100	81 1/2	82 1/2
Maryland & Pennsylvania.....	100	29 1/2	30
Norfolk Railway & Light.....	25	28 1/2	29
Seaboard Com.....	100	24 1/2	25 1/4
Seaboard Pfd.....	100	54 1/2	55
United Rys. & Elec. Co.....	50	25	25 1/2
Bank Stocks.			
Bank of Baltimore.....	100	166	167
Bank of Commerce.....	15	39	40
Citizens'.....	100	42 1/2	43
Drillers & Mechanics.....	100	210	225
Exchange.....	100	162	162
Farmers & Merchants.....	40	49 1/2	51 1/2
First National.....	100	136	136
German.....	100	110	113
Maryland.....	30	22	22
Merchants.....	100	184	185
Howard.....	10	14 1/2	15
Marine.....	30	43	45
Second National.....	100	209	210
Union.....	100	132 1/2	134
Western.....	20	37 1/2	38

Trust, Fidelity and Casualty Stocks.	Par.	Bid.	Asked
Colonial Trust.....	50	28	29
Continental Trust.....	100	224	226
Fidelity & Deposit.....	50	151	151
Fidelity Trust.....	100	220	220
Maryland.....	100	110	110
Maryland Casualty.....	25	95 1/2	95 1/2
Mercantile Trust & Deposit.....	50	153	153

Miscellaneous Stocks.	Par.	Bid.	Asked
Baltimore Electric Pfd.....	100	112	113 1/2
Consolidation Coal.....	100	101	101 1/2
G.-B.-S. Brewing Co.....	100	4 1/2	5
George's Creek Coal.....	100	7 1/2	7 1/2
Mer. & Min. Trans. Co., V. T.....	100	75	75

Railroad Bonds.	Par.	Bid.	Asked
Atlantic Coast 1st 4s.....	100	92 1/2	95
Atlantic Coast Conv. Deben. 4s.....	100	103 1/2	103 1/2

At. Coast (Conn.) 4s, Cfs., 5-20s.....	92	93 1/2
Atlantic Coast (S. C.) 4s.....	94	97 1/2
Atlantic Coast L. & N. Col. Tr. 4s.....	93 1/2	94
Balto. & Annapolis S. L. 5s.....	105	77 1/2
Balto. & Harborside 5s.....	103 1/2	105
Balto. & Harris, Ext. 5s.....	103 1/2	105
Carolina Central 4s.....	92 1/2	95
Coal & Coke Railway 5s.....	101	101
Coal & Iron Railway 5s.....	101	101
Col. & Green. 1st 6s.....	104 1/2	105 1/2
Florida Southern 4s.....	93	93
Georgia & Alabama 5s.....	106	106 1/2
Georgia & Florida 5s.....	106 1/2	106 1/2
Georgia, Car. & North. 1st 5s.....	105 1/2	106 1/2
Georgia Pacific 1st 6s.....	111	111
Georgia Southern & Fla. 1st 5s.....	105 1/2	107
Macon, Dublin & Savannah 5s.....	98	100 1/2
Maryland & Pennsylvania 4s.....	85	91
New Orleans Great Northern 5s.....	96 1/2	98
Petersburg Class A 5s.....	102	102
Petersburg Class B 6s.....	115 1/2	117
Potomac Valley 1st 5s.....	106 1/2	108
Raleigh & Gaston 5s.....	108	109
Richmond & Danville 6s.....	102	102
Savannah, Fla. & West. 5s.....	105	105
Savannah, Fla. & West. 6s.....	125	125
Seaboard Air Line 4s.....	87	87
Seaboard 4s, Stamped.....	87 1/2	88
Seaboard Adjustment 5s.....	80	81
Seaboard & Roanoke 5s.....	106	106
Seaboard & Roanoke 6s.....	105	105
South Bound 5s.....	109 1/2	110
Southern Railway Con. 5s.....	107 1/2	107 1/2
Virginia Midland 4th 5s.....	103	103
Virginia Midland 5th 5s.....	103	103
Washington, Balto. & Annap. 5s.....	87	88
Washington-Vandemere 4 1/2s.....	90	90
Western Maryland 4s.....	98 1/2	98 1/2
Western N. C. Con. 6s.....	102	102
Winnington & Weldon.....	108	110 1/2

Street Railway Bonds.		
Anacostia & Potomac 5s.....	99 1/2	100 1/2
Atlanta Con. Street Railway 5s.....	105	105 1/2
Augusta Railway & Electric 5s.....	100	105
Balto., Sp. Pt. & C. 4 1/2s.....	97	97 1/2
Baltimore Traction 1st 5s.....	106 1/2	107
Baltimore Traction (N. B.) 5s.....	109 1/2	110 1/2
Central Railway (Balto.) Con. 5s.....	106	106
Central Railway (Balto.) Ext. 5s.....	106	106
Charleston City Railway 5s.....	101 1/2	101 1/2
Charleston Con. Electric 5s.....	95 1/2	96 1/2
City & Suburban 5s (Balto.).....	104 1/2	106
City & Suburban 5s (Wash.).....	102 1/2	102 1/2
Fairmont & Clarksburg Trac. 5s.....	99 1/2	100 1/4
Fairmont & Clarksburg Trac. Notes.....	99 1/2	100 1/4
Knoxville Traction 5s.....	105	106
Lexington Railway 1st 5s.....	94 1/2	95 1/2
Macon Railway & Light 5s.....	100	101
Maryland Electric Railways 5s.....	98 1/2	98 1/2
Nashville Railway & Light 5s.....	99	99
Newport News & Old Point 5s.....	98	100
Newport News & Old Pt. G. M. 5s.....	77	77
Norfolk & Portsmouth Trac. 5s.....	89 1/2	90 1/4
Norfolk Railway & Light 5s.....	93 1/2	100
Norfolk Street Railway 5s.....	104 1/2	104 1/2
Norfolk & Atlantic Ter. 5s.....	93 1/2	95
United Railways 1st 4s.....	84 1/2	84 1/2
United Railways Income 4s.....	65	65 1/4
United Railways Funding 5s.....	101 1/2	102
United Railways Notes.....	101 1/2	102
Virginia R. & P. 6s.....	96	97 1/2

Miscellaneous Bonds.		
Ala. Con. Coal & Iron 5s.....	70	75
Baltimore Brick 5s.....	77	83
Baltimore Electric 5s, Stp.....	98 1/2	98 1/2
Con. Gas, Elec. Lt. & P. 4 1/2s.....	89	89 1/2
Consolidation Coal Ref. 5s.....	93	93 1/2
Fairmont Coal 1st 5s.....	96 1/2	96 1/2
G.-B.-S. Brewing 1st 4s.....	51	52
G.-B.-S. Brewing Income 5s.....	14 1/2	15
Mt. Vernon-Woodbury Cot. Duck 5s.....	74	74 1/2
United Elec. Lt. & P. 4 1/2s.....	94	95

Bank Reports.

The First National Bank of Birmingham reports June 14, 1912, loans and discounts, \$8,582,318; total cash, \$3,820,849; capital stock, \$1,500,000; surplus and profits, \$1,606,369; circulation, \$1,150,000; total deposits, \$10,670,137; total resources, \$14,926,507. W. P. G. Harding is president; J. H. Woodward and J. H. Barr, vice-presidents; Thomas Hopkins, cashier; F. S. Foster, Thomas Bowron and J. K. Fleming, assistant cashiers; J. E. Ozburn, secretary savings department; J. H. Wetmore, auditor.

The First National Bank of Baltimore, Md., reports at close of business June 14, 1912, loans and discounts, \$3,997,082; capital stock paid in, \$1,000,000; surplus fund, \$350,000; undivided profits, less expenses and taxes paid, \$78,949; total deposits, \$6,141,346; total resources, \$8,196,131. H. B. Wilcox is president; Blanchard Randall, vice-president; Wm. S. Hammond, cashier; Samuel W. Tschudi and R. E. Bolling, assistant cashiers.

FINANCIAL CORPORATIONS.

Ala., Birmingham.—The Commercial Bank & Trust Co., succeeding the Commercial State Bank, is reported organized with \$100,000 capital; W. J. Adams, president; W. F. Lathem, vice-president; J. W. Hughes, Jr., cashier; Evans J. Dunn, F. F. Schillinger, Hugo L. Black, L. V. Clark, Walter K. McDuffy, Louis Pizitz, J. W. Hughes, Sr., G. W. Bains, H. L. Bains, G. W. Yancey, A. R. Moody, George McCleery and D. F. Talley, directors.

Ala., Birmingham.—Plans are being made to organize a new trust company with an authorized capital of \$2,000,000. John D.

Sibley, president, Chamber of Commerce, may be able to give information.

Ala., Birmingham.—Reported that a new insurance company is to be organized by Dr. J. H. Lucas, H. J. Pritchett, J. B. Baird and C. D. Wallace.

Ark., Bradley.—The Bank of Bradley incorporated; capital \$25,000. Incorporators: J. H. Meek, president; Olen Logino, vice-president; W. A. Magee, secretary and treasurer.

Ark., Chester.—The Bank of Chester is reported to have filed articles of incorporation; capital \$10,000; incorporators, Ezra J. Morgan, G. C. Smith and C. P. Hornback.

Ala., Kennedy.—The Bank of Kennedy is reported to have filed articles of incorporation; capital \$15,000; incorporators, J. O. Kennedy and others.

Ark., Mens.—The Polk County Investment Co., capital \$10,000, is reported incorporated by H. M. Frederick, Guy N. Thornton and T. A. Biggerstaff.

D. C., Washington.—The 7th St. Savings Bank, temporary location, 1316 7th St. N. W., is reported to have elected directors thus: President, Somerset R. Waters; first vice-president, August H. Plugge; second vice-president, Harry Kaufman; general counsel, Charles S. Shreve, Jr.; cashier, Ralph E. Burgess; directors, Dr. W. Thompson Burch, Roger O'Hanlon, John W. Gregg, Charles W. Fairfax, Michael O'Hanlon, Willoughby S. Chesley, John R. Wright, John F. Weyrich, Henry J. Ruppert, Joseph B. Thomas, Isadore Freund, Isaac Ottenberg, Alexander H. Pitt, Thomas Heany, Joseph N. Thompson, Henry G. Bergling and Patrick Shugrue. John D. Howard is secretary. Business is to begin July 1.

Fla., Callahan.—A new bank is reported being organized with \$15,000 capital. Business is expected to begin about August 1 with O. O. Mickler as president.

Fla., Inverness.—The Citizens' Bank of Inverness is reported organized with \$25,000 capital; C. E. Allen, president; G. H. Scofield, first vice-president; R. L. Turner, second vice-president; R. L. Fender, cashier.

Fla., Mulberry.—The Citizens' Bank is reported to have filed application for a charter. Business will commence in July with E. W. McCormack as president and Leland Morrow cashier.

Fla., Umatilla.—Official: The Bank of Umatilla, with \$15,000 capital and \$3000 surplus, is incorporated by G. V. De Vault, R. C. Collins, W. L. Yancey, F. L. Owens, C. G. Megargles, Julia Norton, H. A. Wilson, Dr. Chas. M. Roberts, all of Umatilla, Fla., and L. R. Adams of Atlanta, Ga. Business is expected to begin about August 1.

Ga., Atlanta.—Official: The C. W. Eddins Investment Co., capital \$150,000, is incorporated by C. W. Eddins, J. M. Elms, Mrs. C. E. Eddins and Mrs. D. A. Blake. Mr. Eddins will be president and Mr. Elms secretary. Business is to begin July 15.

Ga., Atlanta.—The American Agency Co. incorporated; capital \$10,000; incorporators, G. B. Cobb and others.

Ga., Atlanta.—The Edgar Dunlap Insurance Agency is incorporated with \$50,000 capital by Edgar Dunlap, H. E. Denise and others.

Ga., Plainsville.—A new bank is reported organized with H. M. Veach as president.

Ky., Louisville.—The Great Southern Fire Insurance Co. is organized with \$1,000,000 capital; Augustus E. Wilson, president; William S. Monts, vice-president; Wm. H. Cox, secretary and treasurer; Hill Spaulding, assistant secretary; directors, John C. Mayo, Paintsville, Ky.; Wm. H. Cox, Maysville, Ky.; Hugh Asher, Pineville, Ky.; Dr. T. W. Blakey, Hopkinsville, Ky.; Chas. W. Stoecker, Louisville, Ky.; James E. Gamble, Louisville, Ky.; John W. McCulloch, Owensboro, Ky.; Judge John W. Ford, Pikeville, Ky.; J. D. Wilson, Greensburg, Ky.; Augustus E. Wilson, Louisville, Ky.; Wm. S. Montz, Louisville, Ky.; Richard H. Edelen, Louisville, Ky.

Mo., Oxford.—The Oxford Bank has filed articles of incorporation; capital \$10,000; incorporators, Jeremiah Valliant, Oliver S. Gallup, William H. Myers, William D. Bergman and William D. Nichols. Business is to begin as soon as possible. Press dispatches say that Mr. Valliant will be president and Mr. Nichols cashier.

Mo., Portage des Sioux.—Press dispatches state that a bank capitalized at \$10,000 is to be established by the Bankers' Investment Co., Central National Bank Bldg., St. Louis. Among local parties interested in the new enterprise are A. J. Duval, postmaster; G. W. St. Clin, Gustav Fehlig, W. Wunsch and William Echelle.

Mo., St. Louis.—Official: The Western National Casualty Co., 515-16 Liggett Bldg., is

incorporated by John F. McDermott, president; R. H. Davenport, vice-president; W. L. Rowley, secretary and treasurer; Dr. Floyd Stewart, medical examiner; directors, John F. McDermott, W. L. Rowley, R. H. Davenport, Dr. Floyd Stewart, John J. Leahy, John G. Priest and Grant Wyatt.

N. C., Lenoir.—The Mutual Building and Loan Association is reported chartered; incorporators, Mark Squires, E. F. Allen, Geo. O. Shakespeare, J. M. Crisp, J. R. McNairy, A. N. Todd and M. N. Harshaw.

Okla., Cleveland.—Official: The Cleveland Building and Loan Association chartered and incorporated; capital \$100,000; G. W. Sutton, president; W. H. Bales, secretary; J. C. Ryers, C. C. Breed, Joe Speed, Dan'l McClure, Dave Ratner, O. A. Mitchel, H. H. Nalley and G. C. Sutton. J. M. Hayes is solicitor. Business has begun.

S. C., Cheraw.—The Citizens' Loan & Trust Co., capital \$15,000, is reported organized with S. T. A. McManus president, P. B. Huntley and J. A. Watson vice-presidents; financial board, E. Walker Duvall, S. T. A. McManus, R. J. Mebane, P. A. Murray; directors, S. T. A. McManus, E. Walker Duvall, J. A. Watson, P. A. Murray, R. J. Mebane, M. B. Smith, J. W. Ousley, R. E. Rivers, J. F. Hunter.

S. C., Cheraw.—The Citizens' Bank of Chesterfield County is reported chartered; capital \$50,000. Directors: R. E. Rivers, president; M. B. Smith, first vice-president; J. A. Watson, second vice-president; Fletcher J. Johnson, P. A. Murray, J. T. Moore, J. C. Rivers, S. T. A. McManus, J. L. Anderson.

S. C., Cheraw.—Official: The United Building & Loan Co., capital \$5000, is organized. Henry Nicols is general manager.

S. C., Columbia.—The Standard Insurance & Realty Co. is reported organized with E. B. Caney, Jr., president; Thos. D. Moore, Jr., vice-president; George E. Sparkman, secretary and treasurer.

S. C., Leno.—The Bank of Leno is reported to have effected permanent organization by electing officers thus: D. E. Wyman, president; B. J. Peoples, vice-president; Hugh E. Vincent, cashier; E. H. Wyman, T. O. Lawton, Sr., S. R. Stoner, B. J. Peoples, H. E. Vincent, A. W. Lawton and J. P. Causey, directors.

Tenn., Chattanooga.—The Tennessee Trust Co. is reported to have filed application for a charter; capital \$16,000; incorporators, G. K. Henshall, Victor A. Smith, J. L. Henderson, M. L. Wallis and W. W. Long.

Tenn., Jackson.—Reported chartered: Tennessee Mortgage & Investment Co., capital \$200,000; incorporators, R. D. Blalock, A. M. Alexander, J. L. Brook, R. R. Sneed and Thomas McCorry.

Tenn., Lexington.—The Home Fire Insurance Co. of Tennessee, Henderson county, is reported chartered with \$25,000 capital. Incorporators, R. W. Hall, T. A. Lancaster, A. H. Fuller, H. D. Barry and G. H. Partin.

Tenn., Memphis.—The Citizens' Bank & Trust Co. is reported chartered; capital \$250,000. Incorporators, J. H. Creath, W. Pritchard, J. W. Tooney, W. R. Cross and W. I. Moody.

Tenn., Nashville.—Official: The Bankers' Investment Co. incorporated; capital \$10,000. Business is to begin immediately with F. W. Carr, president; Robert E. Connell, vice-president; Marion P. Frozen, secretary, and William J. Allen, treasurer.

Tenn., Nashville.—The Tennessee Trust Co., capital \$400,000, is reported incorporated by E. A. Lindsay, G. A. Washington, W. W. Dillon, G. N. Tillman, D. H. Bailey, B. F. Almut, H. Sperry and W. J. Cude.

Tenn., Telford.—The Telford Banking Co., capital \$15,000, is reported organized with W. A. Maloney president, W. J. Probst vice-president, C. M. Maloney cashier.

Tex., Waco.—The Continental Trust Co., capital \$1,000,000, is reported to have elected officers thus: Judge Sam R. Scott, president, and George B. Reynolds, vice-president.

Tex., Bartlett.—A State bank capitalized at \$17,000 is reported organized with Adolph Schwertner of Schwertner, president; T. R. Benson of Bartlett, vice-president, and E. Strauss, cashier.

Tex., Cat Spring.—The Cat Spring State Bank, capital \$10,000, is reported incorporated by Charles Dittert, C. Thauaman, August Tinkler and others.

Tex., Cleveland.—The First National Bank of Cleveland has made application for a charter; capital \$25,000; organizers, F. R. Henderson, H. B. Whitmire, T. A. Boothe, N. Garvey and C. G. Hall; correspondent, A. V. Cruise, Cleveland, Tex.

Tex., Houston.—Official: The National Bank of Commerce is organized with \$500,000 capital, and business is to begin about July or August. Organizers: O. T. Holt, J. W.

Reynolds, W. F. Ryder, J. A. Hulen, R. D. Collins, R. C. Duff, J. M. Logan, G. A. Kelley, Lufkin, Tex.; E. A. Blount, Nacogdoches; Charles Schreiner, Kerrville; H. D. McDonald, Corpus Christi; A. H. McFadden, Victoria; C. J. Von Rosenberg, La Grange; H. Amberg, Rutersville, Tex., and Wm. Green, Shiner.

Tex., Orange.—The Orange Land & Trust Co., capital \$100,000, is reported organized with directors thus: W. H. Stark, president; F. H. Farwell, E. W. Brown, L. Miller of Orange, John H. Kirby, F. W. Heitmann and M. E. Foster of Houston, and George W. Newman, Beaumont.

Tex., Perry.—The Farmers' State Bank of Perry is reported chartered; capital \$10,000; incorporators, G. A. Blotch, J. H. Claybrook, W. H. Smith and others.

Tex., Wharton.—The People's Abstract Co., capital \$10,000, is reported incorporated by R. R. Missel, R. B. Hamlet and S. C. Cappel, Jr.

Va., Coeburn.—Official: The Miners' Bank of Commerce Incorporated; capital \$10,000; officers and directors, T. J. Nelson, L. N. Odle, J. H. Melvin, Aaron Russ and Chas. O. Ramsey. Business is to begin June 28.

NEW SECURITIES.

Ala., Heflin.—Reported voted: Cleburne county road bonds.

Ala., Selma.—The New York Life Insurance Co. is reported to have been awarded at a premium \$35,000 of school bonds. J. L. Clay is Mayor.

Ala., Tuscaloosa.—Official: Bids will be received until 10 A. M. July 30 by S. Friedman, commissioner of finance, for \$35,000 of 5 per cent. 30-year school bonds; dated August 15, 1912; denomination \$500. J. V. Jones is City Clerk.

Ark., Fort Smith.—Cyrus Adler of St. Louis is reported to have purchased \$45,000 of 5 per cent. paving bonds.

Fla., Miami.—August 27 an election is to be held. It is reported, to vote on \$125,000 of improvement bonds as follows: Sewerage system, \$15,000; street and sidewalks, \$20,000; docks and parks, \$80,000; to cover indebtedness of city, \$20,000; fire department, \$5,000, and for building incinerators and devices for disposal of garbage, \$5,000. F. G. Eriert is acting mayor.

Fla., Miami.—Reported voted: \$40,000 of Roberts county courthouse bonds.

Fla., Palm Beach.—Reported voted: \$85,000 of road bonds.

Fla., St. Petersburg.—Official: Bids will be received until 7 P. M. July 25 for \$200,000 of 6 per cent. 30-year improvement bonds; denomination \$1,000; dated August 1, 1912. W. F. Divine is City Clerk.

Fla., West Palm Beach.—July 23 an election is to be held, it is reported, to vote on \$60,000 of 5 per cent. 30-year Palm Beach county road bonds.

Fla., Winter Park.—An election is soon to be held, it is reported, to vote on \$10,000 of water bonds.

Ga., Augusta.—Voted: \$500,000 of Savannah River levee, \$100,000 of water-works and \$50,000 of hospital bonds; Thomas Barrett, Jr., is Mayor, and William Lyon Martin, Clerk.

Ga., Columbus.—The \$50,000 of 5 per cent. bridge bonds are reported to have been purchased by the Trust Company of Georgia, Atlanta, at a premium of \$915.

Ga., Cordale.—Reported voted: \$95,000 of water-works, street, school and sewer-extension bonds.

Ga., Decatur.—The Robinson-Humphrey-Wardlaw Company, Atlanta, is reported to have been awarded at \$56 premium \$5,000 of 5 per cent. 30-year sewer bonds.

Ga., Senola.—Official: Bids will be received by B. A. Nolan, City Clerk, until 10.30 A. M. July 8 for \$10,000 of 6 per cent. school bonds which were validated June 17, 1912.

Ga., Waycross.—Press dispatches state that an election is to be held within the next 60 days to vote on \$100,000 of public improvement bonds.

Ky., Covington.—The First National Bank of Covington is reported to have been awarded at par \$281,000 of 4 per cent. 30-year refunding bonds.

Ky., Harlan.—Reported voted: \$10,000 of 5 per cent. building bonds.

Ky., Princeton.—Reported voted: \$30,000 of school district bonds.

Ky., Sharpburg.—Official: Hoehler & Cummins, Toledo, O., have been awarded at 104.21 the \$10,000 of 6 per cent. bonds of graded common school district No. 2; denomination \$500; dated July 1, 1912; maturity July 1,

1917, and one each July 1 thereafter. Address Owens Ratcliff, Sharpburg.

Ky., Williamsburg.—September 21, it is reported, an election is to be held in Whitley county to vote on \$300,000 of courthouse bonds.

La., Gretna.—According to press dispatches, bonds are to be issued for road improvements in Fourth and Fifth wards, Jefferson county. An official letter, however, says "none at present."

La., New Orleans.—The following bids were received for the \$300,000 of Public Belt Railroad bonds: Interstate Trust & Banking Co., \$304,015 and accrued interest; S. A. Kean & Co., Chicago, \$302,000 flat; Spitzer-Roerick Company, Toledo, O., \$300,000 and accrued interest; Metropolitan Bank, 97½ cents and accrued interest. No award has as yet been made.

Md., Frederick.—Official: Baker, Watts & Co. and Nelson, Cook & Co., Baltimore, have purchased jointly the \$25,000 of 4½ per cent. 15-30-year Frederick county school bonds.

Md., Princess Anne.—Reported voted: \$10,000 of water and sewer bonds.

Md., Rockville.—Official: Bids will be received until noon July 16 for the following 4½ per cent. Montgomery county bonds: \$12,000 of \$500 denomination and \$35,000 of \$1,000 denomination. Joseph T. White is president Board of County Commissioners and Berry E. Clark, clerk.

Miss., Aberdeen.—Official: Bids will be received until 2 P. M. July 1 for \$50,000 of 5 per cent. 11-25-year Monroe county road bonds; dated July 1, 1912; denomination \$500. G. G. Ray is clerk Board of Supervisors Monroe County.

Miss., Ellisville.—H. C. Speer & Sons Company, Chicago, are reported to have been awarded \$10,000 of 5 per cent. Jones county school bonds at a premium of \$205.

Miss., Meridian.—Official: Defeated: Street, viaduct and sewer bonds. C. W. O'Leary is City Clerk.

Miss., Phenix.—Reported that town proposes issuing \$4000 of bonds for dormitory for Agricultural High School of Clay county.

Miss., Prairie.—Bids will be received until 2 P. M. July 1 for \$3500 of 5 per cent. street-improvement bonds; dated July 1, 1912; denomination \$100; M. W. Gathings is Mayor.

Miss., West Point.—July 2, it is reported, an election is to be held to vote on sewer-extension bonds.

Mo., Carthage.—Reported voted: \$10,000 of school bonds.

Mo., Clayton.—Official: The William R. Compton Bond & Mortgage Co., St. Louis, purchased on May 10 at \$6273.65 the \$6,000 of 5 per cent. 10-20-year school bonds of District No. 21. Address William Cepts, 2490 Hord Ave., St. Louis.

Mo., Excelsior Springs.—Coffin & Crawford, Chicago, are reported to have been awarded \$47,000 of park certificates. Walter A. Craven is City Clerk.

Mo., Independence.—Reported voted: \$75,000 of school bonds.

Mo., Princeton.—Wm. R. Compton Company of St. Louis and Chicago is reported to have been awarded \$20,000 of 5 per cent. 5-20-year school district bonds.

Mo., West Plains.—Reported voted: \$30,000 of West Plains special road district bonds.

N. C., Andrews.—Official: Bids will be received until 4 P. M. June 19 for \$10,000 of 30-year school district building bonds; interest 5½ or 5 per cent.; dated July 1, 1912; denomination \$500 or multiples. J. Q. Barker is chairman school trustees.

N. C., Asheville.—Official: November 4 an election is to be held to vote on \$50,000 of 5 per cent. 20-year school-building bonds. R. J. Tighe is secretary and J. R. Erwin treasurer School Board, Asheville, N. C.

N. C., Asheville.—An election is to be held November 5, it is reported, to vote on \$50,000 of school improvement bonds.

N. C., Carthage.—Reported that bids will be received until 2 P. M. July 6 by W. G. Jennings, Town Secretary, for \$30,000 of 6 per cent. 30-year water and sewer bonds.

N. C., Monroe.—The Carolina Insurance Co. of Charlotte is reported to have been awarded the \$30,000 of sewerage bonds.

N. C., Spencer.—The J. B. McCrary Company of Atlanta, contractors, have, according to press dispatches, purchased sewer bonds.

N. C., Wentworth.—Official: Defeated: Rockingham county bonds. Jas. T. Smith is County Clerk.

N. C., Wilson.—Reported voted: \$30,000 of school bonds.

N. C., Winston.—Notice is given that the

election to vote on \$400,000 of municipal bonds will be held July 23. R. I. Dalton is Mayor.

Okla., Butler.—Official: Kennedy & Fleming, engineers and contractors, Oklahoma City, purchased the \$10,000 of water bonds.

Okla., Hastings.—Reported voted: \$15,000 of water-works bonds.

Okla., McAlester.—Notice is given that the election to vote on \$50,000 of school bonds will be held July 2. B. A. Enloe, Jr., is Mayor, and J. M. Gannaway, City Clerk.

Okla., Skiatook.—Reported voted: \$9,000 of sewer and \$3,000 of electric-light bonds.

Okla., Welch.—Elections will soon be held. It is reported, to vote on \$15,000 of water-works, \$3,000 of deep-well drilling and \$2,000 of city hall and jail bonds.

S. C., Eutawville.—Reported that an election will soon be held to vote on \$8,000 of 6 per cent. 20-year school district building bonds.

S. C., Lancaster.—W. N. Coler & Co., New York, are reported to have purchased at \$47,874.20 the \$47,000 of 5 per cent. refunding railroad bonds. M. C. Gardner is County Supervisor of Lancaster county.

S. C., Laurens.—Bids will be received by C. H. Roper, secretary board of trustees of Laurens School District, until 3 P. M. June 28 for \$10,000 of 5 per cent. 30-year refunding bonds.

S. C., Rock Hill.—Official: July 25 an election is to be held to vote on \$50,000 of 5 per cent. 25-40-year water-extension bonds; denomination \$1,000. Address Public Works Commission.

S. C., Spartanburg.—An official letter confirms report that an election is to be held July 16 to vote on \$200,000 of bonds. O. L. Johnson is Mayor.

Tenn., Chattanooga.—The Security Savings Bank & Trust Co. of Toledo, O., purchased at a premium of \$22.50, it is reported, \$1793.24 street-paving bonds.

Tenn., Knoxville.—Official: The Knoxville Banking & Trust Co. of Knoxville purchased on June 18 the \$150,000 of water-works refunding and \$125,000 of Third Creek sewer 4½ per cent. bonds, and the \$15,000 of street extension 5 per cent. bonds at \$290,022.50 and accrued interest. D. G. Leahy is recorder and treasurer.

Tenn., Memphis.—Reported that all bids received June 18 for the \$275,000 of Tri-State Fair bonds were rejected. It is stated that new bids will be asked.

Tenn., Selmer.—The First National Bank of Selmer is reported to have purchased \$15,000 of 6 per cent. drainage bonds.

Tex., Abilene.—July 26, it is reported, an election is to be held to vote on \$30,000 of street and road bonds. E. N. Kirby is Mayor.

Tex., Austin.—Official: The Commerce Trust Co., Kansas City, Mo., purchased on June 4 at a premium the \$750,000 of 5 per cent. street, sewer, school, cemetery and hospital bonds; denomination \$1,000. A. P. Wooldridge is Mayor.

Tex., Austin.—The Attorney-General has approved the following securities: \$5,000 of 4½ per cent. 10-30-year Dallas county Trinity River bridge repair bonds; \$3,000 of 5 per cent. 20-40-year bonds of Tarrant county common school district No. 58; \$20,000 of 10-40-year Kerrville street-improvement bonds; \$5,000 of 5 per cent. 10-40-year bonds of Wood county common school district No. 24; \$6,000 of 5 per cent. 15-40-year bonds of Navarro county common school district No. 73; \$150,000 of 5 per cent. 40-year bonds of Gonzales county road district No. 1; \$1,000 of 5 per cent. 5-10-year bonds of Gray county common school district No. 16; \$6,000 of 5 per cent. 40-year bonds of Tarrant county common school district No. 94.

Tex., Beaumont.—Official: Voted: \$100,000 of 5 per cent. 20-40-year bonds of drainage district No. 2; denomination \$1,000. Address R. W. Wilson, County Judge.

Tex., Ennis.—An election is soon to be held. It is reported, to vote on \$13,000 of school bonds.

Tex., Floresville.—Official: Voted June 6: \$20,000 of 5 per cent. 40-year school-building bonds; denomination \$1,000. Bids will soon be asked. Address S. V. Houston, Mayor.

Tex., Goliad.—Reported voted: \$20,000 of Goliad independent school district bonds.

Tex., Hillsboro.—Official: Bids will be received until 8 P. M. July 16 for \$40,000 of 5 per cent. 20-40-year school bonds. Denomination \$100; dated July 1, 1912. J. D. Tomlinson is Mayor.

Tex., Kaufman.—June 29, it is reported, an election is to be held to vote on \$200,000 of road bonds.

Tex., LaGrange.—Reported that all bids re-

ceived for the \$17,000 of sewerage bonds were rejected.

Tex., Madisonville.—July 15, it is reported, an election is to be held to vote on \$15,000 of water-works bonds.

Tex., Marshall.—Reported voted: \$28,000 of street-improvement bonds.

Tex., Richmond.—Reported that it is proposed to issue \$150,000 of road and \$100,000 of drainage bonds of Richmond voting precinct and precinct No. 7, Fort Bend county.

Tex., Seymour.—Bids will be received until 10 A. M. June 27 for \$100,000 of 5 per cent. 10-40-year Baylor county road-improvement bonds. Nat G. Mitchell is County Judge.

Tex., Sherman.—Bids will be received until 7.30 P. M. June 27 for \$40,000 of 5 per cent. bonds, \$33,000 being for water-works and \$7,000 for sewers; dated July 1, 1912. John C. Wall is Mayor.

Va., Abingdon.—The Dominion National Bank of Bristol is reported to have purchased at a premium \$18,000 of Goodson district, Washington county, bonds.

Va., Chase City.—Press dispatches state that all bids received June 14 for the \$45,000 of 5 per cent. 21-year water and sewer bonds were rejected.

Va., Danville.—The question of issuing \$50,000 of 4 per cent. 30-year refunding bonds is reported under consideration.

Va., Newport News.—Official: City will vote on \$50,000 of boat harbor bonds, and not \$25,000 as previously reported. Marcus Jones is Mayor.

Va., Stafford.—The Farmers & Merchants' State Bank, Fredericksburg, is reported to have been awarded, at 101, the \$100,000 of 5 per cent. 10-30-year Stafford county road bonds.

W. Va., Grafton.—Mayer, Deppe & Walter, Cincinnati, are reported to have purchased \$90,000 of 5 per cent. water-works improvement bonds at a premium of about \$270.

W. Va., Grant, P. O. Newell.—Reported voted: \$20,000 of Grant school district building bonds.

W. Va., Lewisburg.—Notice is given that an election is to be held June 29 to vote on \$23,000 of 6 per cent. 10-34-year school bonds of Falling Springs District, Greenbrier county. R. J. Walkup is president and B. A. Rapp secretary Board of Education.

W. Va., Mannington.—Official: Bids are being received for \$300,000 of Mannington District, Marion county, road bonds recently voted. Address F. R. Stewart.

W. Va., Morgantown.—Official: Clay district, Monongalia county, has voted \$300,000 of bonds to assist Morgantown & Dunkard Valley Railroad to build across the district from Cassville to Blacksburg.

W. Va., Moundsville.—An official letter says: "The proposition for road bonds in Marshall county has fallen through." J. E. Chase is clerk.

W. Va., Moundsville.—Press dispatches state that an election is to be held on July 2 to vote on \$15,000 of school bonds of Washington district, Marshall county.

W. Va., Wheeling.—The Fifth-Third National Bank of Cincinnati is reported to have purchased at \$1874.45 premium \$52,000 of 5 per cent. 10-year street-improvement bonds.

At Rockville, Md., bids will be received until noon July 16 for \$12,000 of 4½ per cent. 24-year bonds of Montgomery county; denomination, \$500. Further particulars will be found in the advertising columns.

At Rockville, Md., bids will be received until noon July 16 for \$35,000 of 4½ per cent. bonds of Montgomery county; denomination, \$1,000. Further particulars will be found in the advertising columns.

At Aberdeen, Miss., bids will be received until 2 P. M. July 1 for \$50,000 of 5 per cent. 11-25-year Monroe county road bonds. Further particulars will be found in the advertising columns.

At Hillsboro, Tex., bids will be received until 8 P. M. July 16 for \$40,000 of 5 per cent. 20-40-year school bonds. Further particulars will be found in the advertising columns.

At St. Petersburg, Fla., bids will be received until 7 P. M. July 25 for \$200,000 of 6 per cent. improvement bonds. Further particulars will be found in the advertising columns.

FINANCIAL NOTES.

The First State Bank of Weimar, Tex., is reported to have increased its capital from \$25,000 to \$50,000.

[For Additional Financial News, See Page 80.]

Established 1835
The Merchants National Bank
 South and Water Sts., BALTIMORE, MD.
 DOUGLAS H. THOMAS, President.
 WM. INGLES, Vice-President and Cashier.
 J. C. WANDS, Asst. Cashier.
 JOHN B. H. DUNN, Asst. Cashier.
 Capital \$1,500,000
 Surplus and Profits - \$900,000
 Deposits \$12,000,000
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 United States Depository and Disbursing Agent.
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 J. EMMETT SMITH, V.-Pres. and Gen. Counsel.
 WM. G. TAYLOR, Treasurer.
 HARRY W. DAVIS, Secretary.
 W. W. PUSEY, 2d Title and Real Estate Officer.

H. B. Wilcox, President. Blanchard Randall, V.-Pres.
 Wm. S. Hammond, Cashier.
 Saml. W. Tschudi, A. Cash. R. E. Bolling, A. Cash.
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 Surplus and Net Profits - 400,000
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The National Exchange Bank
 OF BALTIMORE, MD.
 Hopkins Place, German and Liberty Sts.
 Capital, \$1,000,000
 July 15, 1908, Surplus and Profits, \$671,631.60
 OFFICERS:
 WALDO NEWCOMER, President.
 SUMMERFIELD BALDWIN, Vice-Pres.
 R. VINTON LANSDALE, Cashier.
 C. G. MORGAN, Asst. Cashier.
 Accounts of Mercantile Firms, Corporations, Banks, Bankers and Individuals Invited.

SURETY BONDS
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 OF MARYLAND
 Home Office, - - BALTIMORE, MD.
 Total Assets Dec. 31, 1911, \$8,133,000.57
 Pioneer Surety Co. of the South.
 Becomes Surety on bonds of every description.

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 Sec'y and Treas. President

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 GEORGE C. MORRISON, Vice-Prest. EDWIN W. POE, Sec.-Treas.

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 With Records of Established Earnings
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 Proven Public Utility Securities
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Electric Bond and Share Company
 (Paid-up Capital and Surplus, \$7,800,000)
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The Fifth-Third National Bank
 CINCINNATI, OHIO

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 601-602 Savannah Bank and Trust Co. Bldg.
 SAVANNAH, GA.
 Long Distance Phone
 References—Any Bank in Savannah
CORPORATIONS ORGANIZED CAPITAL NEGOTIATED
 For firms who desire additional capital to increase their business. Will contract to sell issue of stock or bonds of any legitimate business enterprise, either developed or undeveloped.
 C. R. SKINNER,
 Fidelity Building, Philadelphia, Pa.

COTTON YARNS
Paulson, Linkroum & Co.
 COMMISSION MERCHANTS
 NEW YORK PHILADELPHIA CHICAGO
 87-89 Leonard Street 120 Chestnut Street 206 S. Market Street

RESOURCES - \$14,975,352.57
 DEPOSITS DEC. 31, 1909.....\$ 8,041,252.59
 DEPOSITS DEC. 31, 1910..... 8,809,843.00
 DEPOSITS DEC. 31, 1911..... 10,344,670.57
 This growth indicates that we have the ability and disposition to give GOOD TRUST COMPANY SERVICE. We can prove it—to your advantage.
 ALLOWS INTEREST on daily balances of \$500 or over, subject to check, and special rates for time deposits.
 ACTS AS TRUSTEE under mortgage, Registrar and Transfer Agent of Stocks and Bonds of Corporations.
 Securities held on deposit for out-of-town corporations and individuals.
 Acts as Financial Agent for Municipalities and Corporations.
MERCANTILE TRUST & DEPOSIT COMPANY
 OF BALTIMORE
 CAPITAL - \$1,500,000.00 SURPLUS - \$3,000,000.00

Never Apply Dressings TO "AMERICAN" Transmission Rope

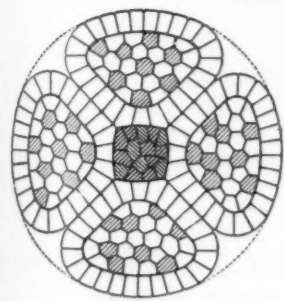


FIG. 12
 "American" Transmission Rope Showing Lubricated and Cover Yarns

It Doesn't Need Dressing

It is permanently self-lubricating; the core about which the strands are laid and several yarns of each strand are impregnated with a specially prepared lubricating and waterproofing compound, which prevents internal wear and preserves the fibre in its original state.

"AMERICAN" Transmission Rope has proved itself not alone the most durable of transmission ropes, but the cheapest, most efficient and most economical of all known means for transmitting power.

Write for our "BLUE BOOK OF ROPE TRANSMISSION."

American Manufacturing Company

Makers of "American" Transmission Rope

Noble and West Sts.

Brooklyn, N. Y. C.

The First State Bank of Abilene, Tex., according to press dispatches, has increased its capital from \$55,000 to \$100,000.

The Middlesex Banking Co. is reported to have amended its charter, increasing its capital from \$10,000 to \$100,000.

The Cleveland County Bank of Kingsland, Ark., according to press dispatches, has increased its capital from \$15,000 to \$30,000.

The Bank of Hamlet, at Hamlet, N. C., is reported to have increased its capital from \$25,000 to \$35,000.

The Central National Bank of St. Petersburg, Fla., has, it is reported, voted to increase its capital from \$50,000 to \$100,000.

According to press dispatches, the home office of the Jefferson Standard Life Insurance Co. is to be removed from Raleigh to Greensboro, N. C.

The Commercial Bank & Trust Co. of Memphis, Tenn., is reported to have opened a branch at 500 S. Main St. A. B. Lewis is in charge.

The Cotton States Insurance Co. of Atlanta, Ga., has amended its charter to change its name to the Cotton States Fire Insurance Co. and increase its capital from \$100,000 to \$1,000,000.

According to press dispatches from Chester, S. C., the Planters' Bank has been merged with the Commercial Bank and the capital of the latter institution increased from \$50,000 to \$100,000.

At the annual meeting of the Alabama Association, held at Mobile May 17 and 18, the following officers were elected for the ensuing year: President, W. H. Manly, cashier Birmingham Trust & Savings Co., Birmingham; vice-president, Michael Cody, president Exchange National Bank, Montgomery; secretary-treasurer, McLane Tilton, Jr., president First National Bank, Pell City.

The National City Bank of New York, which received its first charter June 16, 1812, and is therefore more than 100 years old, has issued in pamphlet form a brief review of its history, which is not merely interesting, but informing, as it contains important facts and references to the early business conditions in New York. But equally entertaining is the description of the bank building, one of the notable structures in the financial district. The capital of the National City Bank is \$25,000,000, fully paid, and its surplus and undivided profits amount to \$28,390,534.

At the annual meeting of the Virginia Bankers' Association, held at Old Point Comfort, June 20-22, the following officers were elected for the ensuing year: President, Thomas B. McAdams, cashier Merchants' National Bank, Richmond; vice-presidents, Group 1, W. B. Vest, cashier Citizens' and Marine Bank, Newport News; Group 2, W. M. Addison, cashier National Bank of Virginia, Richmond; Group 3, C. C. Tiffany, president Fauquier National Bank, Warrenton; Group 4, V. Valden, cashier First National Bank, Farmville; Group 5, J. W. Bell, president First National Bank, Abingdon; secretary, Walker Scott, cashier Planters' Bank of Farmville; treasurer, Julian Hill, cashier National State and City Bank, Richmond.

At the annual convention of the Maryland Bankers' Association, held at the Blue Mountain House, June 20, 21 and 22, the following officers were elected for the ensuing year: President, Daniel Annan, Cumberland; first

vice-president, W. C. Page, Baltimore; vice-presidents, James T. Bright of Centerville, George R. Gehr of Westminster, James M. Sloan of Lonaconing, Allan A. Harris of Chester, W. J. Delcher, William S. Hill of Upper Marlboro; J. Sawyer Wilson, Jr., Yates Penniman and Thomas M. Hullings of Baltimore; secretary, Charles Hann, Baltimore; treasurer, William Marriott, Baltimore; committee of administration, Waldo Newcomer, Baltimore (chairman); Joshua W. Miles, Princess Anne; Joseph D. Baker, Frederick; W. B. Copper, Chestertown; H. B. Wilcox, Baltimore, and N. H. Baible, New Windsor.



All the Work in Sight

The new machines in the Burroughs Class 300 line have visible printing, visible adding and visible writing, all in easy reading range and all at the same distance from the eye.

The most visible of all visible adding machines, extremely low keyboard, up-to-the-minute typewriter carriage, backed by the Burroughs reputation and Burroughs Service, mechanically perfect and low in price—it is a machine you'll want to see.

May we show it to you?

Burroughs Adding Machine Co.
80 Burroughs Block, Detroit, Michigan

BANK STATIONERY

This month we are making a special run on

BANK ENVELOPES

Send for prices.

Young & Selden Co.

BANK STATIONERS BALTIMORE, MD.

Lithographing, Printing, Envelopes
Blank Book Makers, Book Binding
Letter Heads, Office Supplies
Steel Die Work

Capital for Southern Industries

Peabody, Houghteling & Co.

(Established 1865)

105 So. La Salle Street CHICAGO, ILLINOIS

To Manufacturers and Capitalists

Contemplating the Establishment of Industrial Enterprises

Attention is called to the exceptionally favorable location of

NEWPORT NEWS, VA.

on Hampton Roads, fifteen miles from the sea. Deep water, railway and sea transportation facilities unrivaled. Climate salubrious. Apply to

W. B. LIVEZEY, President

OLD DOMINION LAND COMPANY
NEWPORT NEWS, VA.

CONDENSED REPORT TO COMPTROLLER

The First National Bank OF BIRMINGHAM, ALA.

ALABAMA'S FIRST MILLION-DOLLAR BANK

FRIDAY, JUNE 14, 1912.

RESOURCES	LIABILITIES
Loans and Discounts.....\$8,582,318.20	Capital Stock.....\$ 1,500,000.00
Overdrafts.....139.45	Surplus and Profits.....1,606,382.20
U. S. Bonds and Premiums. 1,367,000.00	Circulation.....1,150,000.00
State of Alabama Bonds... 276,800.00	
Other Stocks and Bonds... 688,900.00	
Banking House.....190,500.00	
CASH	DEPOSITS
In Vault.....\$1,090,337.63	Individual...\$ 9,408,643.40
With Banks... 2,653,511.92	Bank.....1,161,493.81
With U. S. Treasurer... 77,000.00	United States. 100,000.00
\$ 3,820,849.55	\$10,670,137.21
\$14,926,507.20	\$14,926,507.21

OFFICERS

W. P. G. HARDING, President
J. H. WOODWARD, Vice-President
THOMAS HOPKINS, Cashier
THOMAS BOWRON, Asst. Cashier
J. E. OZBURN, Secretary Savings Department
J. H. WETMORE, Auditor
J. H. BARR, Vice-President
F. S. FOSTER, Asst. Cashier
J. K. FLEMING, Asst. Cashier

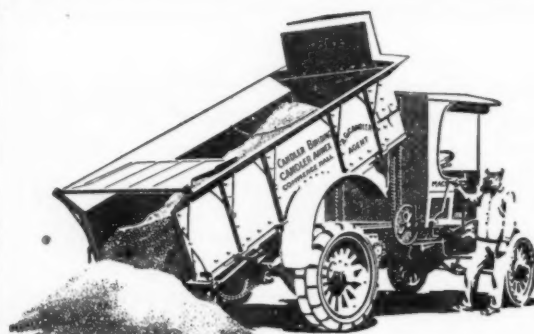
PARTICULAR ATTENTION GIVEN TO COLLECTIONS
DIRECT CONNECTIONS AT ALL ALABAMA POINTS

HOWARD & COMPANY

INDUSTRIAL MINERALS BROKERS COTTON SEED PRODUCTS

Foreign and Domestic Fertilizer Materials. Import and Export Freight Contractors.
Custom House Brokers and Forwarding Agents.

Cables-DESPATCH SAVANNAH, GA.



This truck hauls 6 to 8 loads daily (over a 5-mile route) taking the place of three teams.

Mack Saurer Hewitt

Proved by 12 years of real service Proved by 17 years of real service Proved by 10 years of real service

"Leading gasoline trucks of the world."

Measure truck value by:

1. Years of service shown.
2. Fitness for your purposes.

Our trucks are proved investments.

1. Most years in actual use.
2. All sizes (1 to 10 tons) and styles.

Capacities: 1, 1½, 2, 3, 4, 4½, 5, 6½, 7½ and 10 tons.

We have accurate data on the use of trucks in practically every line of business. Send for that about transportation service for all lines of manufacture. Then consult our Engineering Department—directly or through our nearest representative.

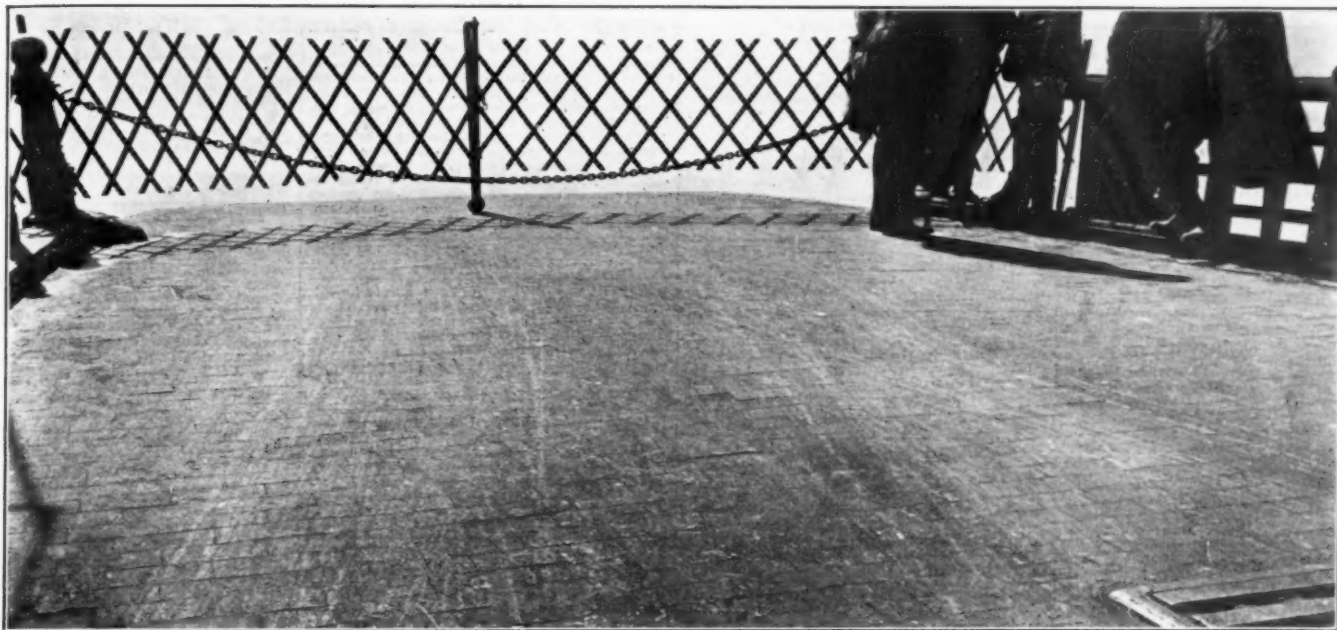
International Motor Company

General Offices

Works

Broadway and 57th St., New York Allentown Pa; Plainfield N J
Sales and Service Stations: New York, Chicago, Philadelphia, Boston, Cleveland, Cincinnati, Buffalo, Newark, Baltimore, Atlanta, St. Louis, Kansas City, Denver, Los Angeles, San Francisco and other large cities.

Wood Block Pavement



U. S. Wood Blocks on deck of Steamer "Winthrop" of The Ferries Co., Portsmouth, Va.

Wood Blocks for Ferry Boats

Plank floors for ferry boats are out of date; they splinter so rapidly that the maintenance of the deck is a serious item in up-keep charges, whereas, a pavement of creosoted wood blocks will last as long as the boat, without any renewal or repairs.

Plank floors are impossible to keep clean, and rapidly get disgustingly dirty, whereas a wood block flooring is always smooth, sanitary and easily kept in a sightly, clean condition.

Plank floors are not water-proof, and the water getting underneath rots them rapidly and necessitates, in addition, the construction of a water-proof deck beneath.

Wood Block floors can be laid over a tar-paper sheathing and the joints filled with pitch, making a deck that is water-proof and one that will stay so.

Wood Block Pavements were first adopted on certain ferry boats in New York Harbor 10 years ago, and since then the use of wood blocks on ferry boats has become standard all over the country.

Wood blocks, of course, are primarily for city streets of heavy traffic. Also for courtyards, bridges and factory floors.

Booklet with further information on request.

U. S. WOOD PRESERVING CO., 165 Broadway, NEW YORK

Classified Opportunities

MEN WANTED

HIGH-GRADE SALESMEN having acquaintance among large manufacturers will hear of side line paying liberal commission; no samples required. Address "Allen," Box 652, Cincinnati, Ohio.

WANTED—A hustler to sell some valuable lands, subdivided, small quantities, good terms, from blueprints; 90 per cent. commission allowed. Address No. 1053, care Manufacturers Record.

WANTED—Good salesmen for high-class subdivision in famous Houston-Galveston district, on electric interurban, close to Houston. This is your opportunity to make money. Write for particulars. Address South Texas Mortgage Co., Houston, Texas.

LIVE CULVERT SALESMEN WANTED—To represent up-to-date and strong corrugated culvert manufacturing plants, located in Roanoke, Va.; Wilmington, N. C.; and Jacksonville, Fla.; only high-grade and experienced culvert salesmen, familiar with the trade in the territories mentioned, are desired. We have openings also for experienced general line sheet-metal salesmen for these plants. For full particulars address Perry Van Horne, Canton, Ohio.

WANTED—Practical ice and light man with \$10,000 to take stock and assume management of plant in town of 4000 population in fine black land belt. Plants have been thoroughly overhauled and are in fine shape. Will incorporate business. Have too much other business to look after is reason for change. Address Honey Grove Ice & Light Plant, Honey Grove, Tex.

MILL-SUPPLY SALESMAN WANTED, to travel in Florida, by house handling general line of mill supplies and machinery, visiting sawmill, phosphate mining and retail hardware trade. Applicants kindly give full name, address, age, previous employer, territory traveled and salary expected. Address No. 1052, care Manufacturers Record.

SALES MANAGER WANTED.

Big house wants first-class sales manager to sell medium to coarse colored cotton goods of established reputation to the large wholesale trade; must be a "top-notch" in ability and experience and be able to handle the proposition successfully from the start; must know goods, markets and dry-goods people thoroughly; must organize his own selling force and be able to reach the biggest wholesale trade without experimenting and without delay.

Permanent place and generous salary to right man. State age, habits, former positions held and salary expected. Address by letter only, Cotton Fabrics, care Lord & Thomas, No. 5 South Wabash Avenue, Chicago, Illinois.

WE WANT manufacturers' agents or salesmen who are familiar with the sale of building special ties to sell, on commission, the best metal store front (copper) made. We want one live wire in each city. We have the real goods and we only want real salesmen. Address No. 1949, care Manufacturers Record.

AGENCIES WANTED

WANTED—Manufacturer having a product of specialties to market, write us. We are in position to sell any article of merit. Manufacturers' Agency, 319 Cuyahoga Building, Cleveland, Ohio.

SITUATIONS WANTED

OPEN FOR POSITION.—An up-to-date commercial secretary, experienced in municipal sanitation, has a record as a home builder, is open for an offer and will be pleased to communicate with any organization looking for a live man. Address No. 1054, care Manufacturers Record.

YOUNG MARRIED MAN, 33 years of age, with over 16 years' experience handling accounts—cost data, finances and correspondence for general construction company, together with some experience in general superintending, desires similar position; can furnish best of references. Address No. 1050, care Manufacturers Record.

EDUCATIONAL

RENSSELAER POLYTECHNIC INSTITUTE, TROY, N. Y.—Courses in Civil, Mechanical and Electrical Engineering, and General Science, leading to the degrees of Civil Engineer (C.E.), Mechanical Engineer (M.E.), Electrical Engineer (E.E.), and Bachelor of Science (B.S.). Special courses in engineering and science. Splendidly equipped new engineering laboratories. Send for catalogues to Registrar.

BANKS

THE PALMETTO NATIONAL BANK, Columbia, S. C., capital \$250,000, solicits accounts of banks, firms, corporations and individuals, either commercial or savings accounts.

AUDITOR AND ACCOUNTANT

INVESTORS—STOCKHOLDERS.—JOHN S. OGLESBY, PUBLIC ACCOUNTANT, DALLAS, TEXAS. Impartial audits; disinterested appraisals; economical, simple systems. All work given personal attention and supervision. Highest references. Correspondence invited.

Rate 20 cents per line per insertion. Minimum space accepted, four lines. Maximum space accepted, 24 lines. Allow seven words per line. Terms: Invariably cash with order; check, postoffice or express order or stamps accepted. No display type used. Questionable or undesirable advertisements will not be accepted. The assistance of our readers in excluding undesirable advertisements is requested. We reserve the right to refuse any advertisement. No patent medicine, whiskey or mining stock advertisements accepted. Rate for special contracts covering space used as desired within one year, as follows: 100 lines, 18c. per line; 300 lines 16c. per line; 500 lines or more, 15c. per line.

CAPITAL WANTED

WANTED—Buyer of capital stock in well-equipped veneer plant in midst of good timber to run twenty years; business demands increased capital. Box 41, Jackson, Mississippi.

WOULD like to correspond with someone to furnish capital and secure a working interest in theater innovation; excellent opportunity. Address Victor Pierret, 369 Church St., Roanoke, Va.

PARTNER WANTED.

PARTNER with \$15,000 wanted to join me in forming construction company to operate in the South. Address No. 1036, care Manufacturers Record.

WANTED—Partner with small capital to start French dry cleaning and steam laundry; must thoroughly understand steam laundry; good opportunity to right party. Box 81, Winter Park, Fla.

BUSINESS OPPORTUNITIES

ABSTRACTS OF TITLE a specialty. Loans negotiated. Inheritances investigated and procured. Real Estate Title Co., New Martinsville, W. Va.

GILKEY VENEER CO., MARION, N. C., would like to correspond with hat-block manufacturers with a view of supplying them with material.

GOING TO EUROPE SHORTLY. I could arrange to raise capital for manufacturing or land proposition of great merit. Send full particulars to Dr. J. H. Burgin, Lowell, Mass.

FOR SALE—Townsite in best farming section of Central West Texas, on new trunk-line road; will consider city income property in exchange. Address Box 385, Houston, Tex.

JOIN ME AND REAP A FORTUNE.—Have advance information as to railroad townsite location. Big, quick turn. Get busy now. Bonanza. J. H., Box 217, Marfa, Tex.

WANTED—To lease store and hotel department of some good industrial company, to be operated in connection therewith; have attractive proposition for first-class enterprise. Address T. L. Betterton, 1105 North Third Ave., Knoxville, Tenn.

MANUFACTURING and machine shop would like to correspond with young man of clean, Christian habits, thoroughly trained in this line, with view of investing a working interest with us. Address No. 999, care Manufacturers Record.

MANUFACTURERS AND INVESTORS.—No quicker way to get rich than to market a good invention. We have several splendid propositions. Write us. Adam Fisher Mfg. Co., St. Louis, Mo.

FOR SUBURBAN DEVELOPMENT.—For Sale—Splendid tract of land on electric line, many other advantages for subdivision; close in, adjacent to growing suburban section of this rapidly-growing city; something worth buying and developing or holding for advance. R. H. Scruggs, Norfolk, Virginia.

SAWMILL AND NAVAL STORES propositions, light manufacturing enterprises, general and special line mercantile establishments, timber and large tracts of agricultural lands, site for profitable industries. We are preparing to sell stock in several live corporations that offer good positions to executive men. Florida Improved Farms Co., P. O. Box 1428, Jacksonville, Fla.

FOR LEASE OR SALE—A boarding and day school for girls under the auspices of the Episcopal Church, in a growing city in the South; superb location; healthy mountainous climate; fine water; one thousand feet above sea level; school affiliated with leading colleges for women in the South; buildings beautiful architecturally, stone and brick, in excellent condition; recently thoroughly overhauled and repaired; new plumbing and heating apparatus; school is ripe for expansion, with good prospects, and needs only the right man or woman at the head to realize its possibilities; present rector retiring for good reasons. Address, for particulars, Rev. James G. Glass, Noble Institute, Anniston, Ala.

AUTOMOBILES

FOR SALE—30 H. P. Mitchell four-passenger, 1910; price \$675, f. o. b. Baltimore; in prime condition, just overhauled, and ready for any kind of work; full equipment, including demountable rims and shock absorbers. It has been driven by the owner and has always had the best of care. For family use or business purposes this car will give perfect satisfaction. Address No. 1045, care Manufacturers Record.

DATA ON ACID PHOSPHATE PLANT WANTED

CONTEMPLATING erection of immense plant or plants for manufacturing acid phosphate to meet requirements many small fertilizer factories to be erected throughout the South, wish specific information in detail covering costs of plants, of maximum output, economic operation, installation burners for pyrites ores, sulphuric acid chamber construction, etc. Wish to correspond with parties familiar with construction and operation. Address "R," Box 327, Allendale, S. C.

TYPEWRITERS

FOR SALE—Typewriters; Remingtons \$12, Smith-Premiers \$12, Hammonds \$17, Oliverts \$20; all other makes at bargain prices for 60 days. Send for special price-list. W. H. Fox, 106 N. La Salle street, Chicago, Ill.

TECHNICAL SUPPLIES

TECHNICAL SUPPLIES.—Manufacturers' agents. Drawing materials, mathematical, scientific and engineering instruments. Enterprise Typewriter & Supply Company, 608 E. Baltimore St., Baltimore, Md.

VIRGINIA HOMESTEAD

FOR SALE—One of the finest estates in Eastern Virginia; 1187 acres; splendid mansion; ample outbuildings; well located. R. B. Chaffin & Co., Inc., Richmond, Va.

FOR SALE—900-acre Virginia homestead; colonial mansion, 25 rooms; at station on Southern Railway; beautiful river; boating and fishing; fully stocked herd thoroughbred Jerseys, Kentucky horses, farm mules, agricultural implements; mineral springs; cool in summer. Price \$50,000; fully equipped; possession at once; long time given on one-half price if desired. Address Holston Industrial Co., Inc., Big Stone Gap, Virginia.

FACTORY SITES

I HAVE an excellent location for a factory. Central Indiana town, with two railroads, good market, intelligent cheap labor. I can furnish site on the railroad, and for the right party a bonus. If you are interested or badly located, and mean business, write me. J. R. Mitchell, Evansville, Indiana.

FOR SALE—Best-located factory site around Atlanta; six acres; level; on Southern R. R. Industrial Line, opposite Atlanta Steel Co.; 1100 feet railroad frontage; two side tracks; brick warehouse 100x100 feet; 22,000-gallon steel tank; city water supply and two cottages on premises. Apply to J. C. Clark, No. 931 Candler Bldg., Atlanta, Ga.

MANUFACTURING AND WAREHOUSE SITES

MANUFACTURING AND WAREHOUSE SITES in and near the City of Richmond, located along line of Southern, Seaboard Air Line, Atlantic Coast Line, Chesapeake & Ohio and Richmond, Fredericksburg & Potomac railways; truckage facilities. Hawkins & Buford, 100 N. 7th St., Richmond, Va. P. O. Box 1013. Reference: Nat'l State and City Bank, Central Nat'l Bank.

INDUSTRIES WANTED

MISCELLANEOUS

LAREDO, TEXAS, wants a tourist hotel, cement factory, up-to-date educational institution, down-the-river railroad. Laredo has best coal Texas, natural gas, equable climate, abundant water, labor. In citrus fruit district. Address Board Trade.

NORFOLK, VIRGINIA, is a growing, thriving city; splendid climate; eight trunk-line railroads; great harbor; steamships to domestic and foreign ports and many other advantages; liberal inducements for manufacturing plants, home seekers and those who want to build and sell houses. Address Ballentine Realty Corporation, Norfolk, Va.

INDUSTRIAL PLANTS FOR SALE

NEWSPAPER PLANT

FOR SALE—NEWSPAPER PLANT in a new and fastest-growing town in New Mexico; worth about \$1700. Also for other investments, agriculture or otherwise, write Heilberg & Blair, 418 Roberts-Banner Bldg., El Paso, Texas.

CREOSOTE PLANT

CREOSOTE PLANT FOR SALE.—One cylinder 100 ft. long, one cylinder 85 ft. long, 7-16" thick, 6 ft. diameter; 12 iron cars; all necessary pumps, piping and track. It is also a valuable plant for charring sap gum to red gum at small cost. Will sell at one-fourth original cost. Savannah Valley Lumber Co., Augusta, Ga. (Owners).

MANUFACTURING PLANT

FOR SALE OR RENT—Manufacturing plant at Kinston, N. C.; six acres ground; two buildings, each 110x50; two boilers, brick; 150 H. P. Corliss engine, two boilers, dynamos and motors. Kinston Real Estate Co., Hackettstown, N. J.

MACHINE SHOP AND FOUNDRY

FOR SALE—Machine shop and foundry; well established; making 35 per cent. on the investment; good chance to increase the business. Address "Machinery," P. O. Box No. 983, Tampa, Fla.

FOR SALE OR RENT—On favorable terms, fully-equipped machine shop and foundry with full line of patterns for parts for standard machines used in the cement district; is now running; has established trade, and is in district where plenty of labor can be obtained; no labor troubles. For full information apply to Executors Estate of Conrad Miller, dec'd, Nazareth, Pa.

SAW MILL, KILNS AND PLANING MILL

FOR SALE—The directors of a company owning and operating a band-saw mill, kilns and planing mill, located on the Atlantic Coast Line Railroad in North Carolina, offer the said plant for sale, complete, and in full operation, at a figure below the net cost of building and equipping. It has been pronounced one of the best planned and equipped mills in North Carolina. Capacity, 30,000 to 40,000 feet finished lumber per day. 100,000,000 feet pine timber immediately tributary, and in addition large quantities of gum and cypress. Only responsible parties with business intentions need reply. Address W. Beatty Harlan, Churchville, Md.

ELECTRIC LIGHT PLANT

FOR SALE—An electric-light plant on a paying basis in a growing North Carolina town; good proposition for anyone with about \$5000; owner has other business. Address No. 1051, care Manufacturers Record.

FLOUR MILL AND COTTON GIN

WE HAVE FOR SALE a flour mill and cotton gin, 60 miles of San Antonio, Texas; flour mill has capacity of 50 barrels per day; cotton gin has capacity of 25 bales per day. This is located in one of the best wheat belts in Texas. This plant is run by water-power and has 7 acres of ground with it. For further particulars write Petty & Boardman, City National Bank Bldg., San Antonio, Tex.

DRYDOCK AND SHIP YARDS

ENTIRE PLANT or good block of stock with management of second largest drydock and shipyards south of Newport News; has paid 8 per cent. dividends and accumulated good surplus for past 8 or 10 years; appraised value of stock, \$180; par, \$100; big future in pleasure-craft manufacture; development of canal makes repair feature best in South. Florida Improved Farms Co., P. O. Box 1428, Jacksonville, Fla.

CANNING PLANT AND BRICK YARD

BEST CANNING PROPOSITION in Southern States; can be handled with small amount of capital; half interest in fine brick-plant; all if absolutely required. Florida Improved Farms Co., P. O. Box 1428, Jacksonville, Fla.

COFFIN FACTORY

ONE OF THE BEST EQUIPPED modern coffin factories in the Southern States, located in Jacksonville; raw material at the doors, with rail and water transportation; best cash offer and quick action takes this snap; satisfactory reason for selling; original cost of plant and real estate, \$15,000. We invite correspondence. All dealings confidential. Refer to any mercantile agency, the Jacksonville Board of Trade, or J. D. Rooney, assistant general industrial agent of the Seaboard Air Line Railway, located at Jacksonville. Florida Improved Farms Co., P. O. Box 1428, Jacksonville, Fla.

FACTORY BUILDING

FRAME BUILDING, 125x80 ft., with 30 skylights, two two-and-a-half-story frame buildings, 60x30 ft., with elevator in each, with two acres land, situated on main line of railroad in small but growing town in South Carolina, suitable for stepladder, wheelbarrow, furniture or wagon factory; plenty of gum, poplar, oak and pine timber at hand. This property could be had on live proposition. Can furnish 50-horse-power engine and 60-horse boiler and adjoining property. For information address L. I. Strauss, agent, Sumter, S. C.

COTTON-OIL MILL

FOR SALE.—Owning two three-press cottonseed-oil mills, complete, in the same town, we desire to sell one to be moved to some other point. If you contemplate erecting a mill, it will pay you to write us, as we can sell you a complete outfit at a bargain. Monroe County Cotton Oil Company, Aberdeen, Miss.

VENEER PLANT

IF YOU want to be interested in a fine veneer plant it will be to your interest to communicate with me. This is the opportunity of your life. Edward Loggins, Greenwood, Miss.

SAW MILL WANTED

WANTED—Party with mill to cut, under contract, 25,000,000 feet timber, Gadsden county, Florida; operations to commence without delay. State full particulars. President, 618 Fidelity Bldg., Philadelphia, Pa.

LAND WANTED

WE WANT TRACTS OF LAND located in or immediately adjoining thriving cities; must be well located and suitable for platting into town lots. F. J. Raymond Realty Co., Evansville, Ind.

MINERAL AND TIMBER LANDS, WATER POWERS AND MISCELLANEOUS PROPERTIES

BEFORE YOU BUY LAND or make an investment in the South or Southwest send for a copy of my "Investor and Land Buyer" with list of splendid properties for sale; free on application. Jo A. Parker, Parma, Mo.

IF YOU WANT cypress lands, pine lands, cut-over tracts, colony tracts, ten and twenty-acre tracts, orange groves, truck farms, write to G. C. Rogan, Box 536, Lakeland, Fla. Fifteen years in the State.

VIRGINIA AND NORTH CAROLINA farms and timber lands, city and suburban real estate, factory sites. Write us before buying. Seaside Realty Corporation, 432 Law Building, Norfolk, Va.

WINTER HOMES and home sites in attractive modern Florida town; some beautiful fresh, also salt water frontages; truck and fruit lands; bearing orange groves, timber and colonization tracts. W. W. K. Decker, Tarpon Springs, Florida.

SAN ANTONIO.—390 acres, partly within the city limits; very high and slightly close to street car and ripe for development; the best speculative buy in S. W. Texas. With two new railroads opening headquarters here a tremendous impetus has been given business in this section. Owner must sell. Price \$100 per acre; far below market value. Rhodus & McAllister, Exc. Agts., 418 Navarro St., San Antonio, Texas.

BRICK CLAY DEPOSIT

A FINE BRICK-CLAY DEPOSIT, with truckage to two railroads and deep-water delivery, for lease or sale to responsible operators by a big corporation; market excellent. Address No. 1044, care Manufacturers Record.

CITY PROPERTIES

173 FEET front by 150 deep on Houston street, San Antonio, next block from Clower Building and one block from the big Rand building now going up, which will be used as a big department store; price \$1000 per front foot; will sell part. Kerr & Moore, Land Merchants, San Antonio, Texas.

IN THE DISTRICT OF COLUMBIA, 103 acres extremely desirable for subdivision, fronting on 16th street and the National Rock Creek Park, at a bargain price. Property immediately adjoining has been subdivided, and in a few months almost \$100,000 worth of lots have been sold at 20 cents to 30 cents a square foot. Full particulars upon request. Robert E. Heater, Colorado Building, Washington, D. C.

FOR SALE BY OWNER.—High-class business property on W. Commerce St., San Antonio, Texas, improved with new building bringing a rent of \$515 per month. If sold in 30 days will take \$450 per front foot. This property will double in value in 3 years. Forced to sell. Terms: 1/4 cash; balance 7%. J. P. Lovelady, 1130 West Commerce, San Antonio, Texas.

GRANITE DEPOSIT

VIRGINIA GRANITE.—A big corporation will sell, lease or otherwise dispose of the most valuable granite deposit in Virginia, with truckage to two railroads and deep-water delivery; equipped to get out paving blocks, dimension and crushed stone. Box 230, Petersburg, Va.

OIL AND GAS LANDS

TO LEASE or let for development, 300 acres of land rich in petroleum, gas and other oil signs, in Cass county, Texas, on tributary of Caddo Lake. C. A. Tower, Henderson, Tex.

OIL AND FARM LANDS

FOR SALE AT A BARGAIN, 80 acres of valuable farming land with \$90 per month income from oil royalties. Also other valuable farms with oil royalties. Address E. E. Glenn, Box 1046, Bartlesville, Okla.

COAL MINE FOR SALE

FOR SALE.—Mine with 2500 acres of coal and surface; electrically equipped; brick buildings for machinery; 60 miners' houses; capacity 1000 tons; operating non-union; running full; three workable seams. For particulars address Chas. E. Baker, Madisonville, Ky.

COAL LAND FOR SALE

FOR SALE.—3200 acres partially developed choice coal lands in Kentucky, in one body, on two trunk-line railroads and a navigable river the year round; bargain price for 90 days. Rush C. Watkins Company, Realty Bldg., Louisville, Ky.

400 ACRES coal land in Kentucky for sale; in sight of railroad; deal direct with purchaser only; bargain. Apply at once. W. H. Tompkins, Bristol, Va.-Tenn.

COAL AND TIMBER LANDS

OWNERS OR PURCHASERS of coal and timber properties. If you want to buy or sell first-class coal or timber properties located and priced right, address G. G. Hoster, Huntington, W. Va.

FOR SALE.—Timber and coal land; 3400 acres fee simple, 1100 mineral rights in red ash district Southwest Virginia; two miles coal-carrying road; complete survey; in sight 28,000,000 tons coal, 8,000,000 feet hardwood timber; owners' sale; no agents. Address No. 1044, care Manufacturers Record.

HARDWOOD TIMBER OPPORTUNITY

HARDWOOD OPPORTUNITY for operator of good credit to contract for any part of 500,000,000 feet hardwood Eastern Kentucky, to be paid for as cut at low stumpage price. No cash required. Must build mill on property. J. H. S., Room 1408, 60 Broadway, New York City.

TIMBER FOR SALE

FOR SALE.—4,500,000 feet of pine timber, immediately on railroad; 65 miles from Norfolk; cheap to quick buyer. Jordan & Davis Company, Norfolk, Va.

TIMBER LAND FOR SALE

ONE MILLION ACRES hardwood; any size tract, anywhere it grows; white oak a specialty; two million acres Southern and Northwestern pine, fir and cedar. Jones The Timber Man, Pettigrew, Ark.

SEVEN THOUSAND ACRES virgin timber, containing 180,000,000 feet cypress, 20,000,000 feet of pine, oak, gum, etc.; three railroads and river transportation; best cypress proposition in Florida; \$300,000. For particulars address G. C. Rogan, Box 536, Lakeland, Fla.

FOR SALE.—1000 timber tracts in the South from 1000 acres and up to any size wanted; 20,000,000 acres listed. Good agents can share in these sales. Write J. C. Bolinger, Hagerstown, Md.

17,385 ACRES pine timber land for sale, 23 miles of Tampa; 4 miles of railroad; estimated cut, 44,000,000 feet; fine colony location; healthy; fine celery, oranges and truck easily grown here. For price and other information address J. F. Grantham, Tampa, Fla.

TIMBER LAND FOR SALE.—12,000 acres in Issaquena county, Mississippi, 3 miles from a small town, on the Y. & M. V. R. R.; about 53,000,000 feet hardwood; soil is rich alluvial and drainage is very good, making this a fine colonization project after timber is removed. Price \$20 an acre. Plat and further details upon application. Barney & Hines, Inc., No. 1358 Central Bank Bldg., Memphis, Tenn.

TIMBER AND TIMBER LANDS FOR SALE.—25,000 acres timber rights in Georgia, about 90,000,000 feet L. L. yellow pine, together with mill and equipment, price \$250,000. 10,000 acres timber rights in Georgia, average 4000 feet L. L. yellow pine, also 20-mile railroad goes with the tract, price \$125,000.

2000 acres in West Virginia, hardwood timber, average 8500 feet per acre, mostly white oak, \$25 per acre for timber rights.

2000 acres in Northeastern Texas, 6000 feet per acre, mostly white oak, connects with two railroads, price \$12.50 per acre.

38,500 acres in North Carolina, estimated 200,000,000 feet timber, white pine, poplar, oak, etc., price \$8 per acre.

7000 acres timber rights in Tennessee, along railroad, oak, poplar, chestnut, etc., estimated 20,000,000 feet, price \$12 per acre.

15,000 acres in Georgia, on railway, estimated 6000 feet per acre, first-class merchantable timber, oak, ash, hickory, poplar, etc., price \$11.50 per acre. Address Frank Van Sant, 712 Southern Bldg., Washington, D. C.

TIMBER, SAW MILL AND TRAM ROAD

FOR SALE.—A 15,000 to 20,000-foot capacity sawmill, planing mill, 15,000 capacity dry-kiln and two and a half miles of well-built tramroad to the timber; one Shay locomotive; one skidder and other logging equipment; 20,000,000 feet of standing pine and hardwood timber, with five and ten-year leases over same, and 10,000,000 feet additional joining that can be secured at reasonable figures; considered one of the best logging propositions now on the market. All of the above offered as one proposition; located on the Charleston & Western Carolina Railway in lower South Carolina. Freight rate to port, 5 1/2 c. per hundred pounds. Georgia Real Estate Company, Savannah, Ga.

CUT-OVER LANDS

11,000 ACRES of cut-over land for sale; perfectly adapted to farming, with little drainage; situated along the G. & W. Railroad and Marion-Andrews Railroad; town of Andrews almost in center of tract; will be sold very cheap if bought in bulk. Edwin Harper, Kingstree, S. C.

FARM AND TIMBER LANDS

TEXAS GULF COAST LANDS.—3800 acres, 2200 prairie and 1600 timbered; touches rail and water transportation; 38 miles Houston; \$25 per acre; 1/2 cash; balance to suit; 7 per cent. on deferred payments. F. S. Phillips, Angleton, Texas.

COLONIZATION LANDS

EIGHTY THOUSAND ACRES in Brewster Co., Texas; close to railroad; best colonization tract for \$5.50 in Texas; plenty of water for irrigation; soil is rich, 75% tillable, and smooth.

Eight thousand acres in Jackson Co., Texas; in rain belt; equally divided in prairie and timber; rich black sandy loam, underlaid with clay subsoil; no finer tract to subdivide; will retail from \$30 to \$40; five miles from railroad. Price \$16. Write us quick for full particulars. Geo. C. Thompson Land Co., No. 228 St. Mary's St., San Antonio, Texas.

COLONIZERS AND INVESTORS.—Three thousand acres of choice Dimmit county artesian belt land, 2 1/2 miles railroad station; suitable for development or colonization; surrounded by the best flowing wells in Dimmit county, and adjoins land now selling above \$100 per acre. The price and terms are right. Texas Land & Loan Co., 229 East Houston St., San Antonio, Tex.

ALABAMA COLONIZATION LANDS.—Large tracts unimproved lands near Mobile; great port; also in other parts of State; low prices; no better propositions in South; productive soil; a present opportunity. Write us. Alabama State Agricultural Land Co., Center, Alabama.

FINE COLONIZATION PROPOSITION, consisting of about 30,000 acres of cut-over pine and cypress lands in Southeast Georgia; 90 per cent. tillable when cleared; will average 2000 feet per acre. This is for quick sale; no trade considered; \$3.25 per acre. S. T. Randle, Real Estate and Investments, Paducah, Ky.

PLANTATIONS FOR SALE

FINE OLD PLANTATION of 2850 acres in Southeast Georgia, near salt water, and irrigated; can raise anything that this section will produce; especially adapted for celery, lettuce and cabbage; ideal location on National Highway and railroad; fine hunting and fishing; can be subdivided to advantage; big money-maker. Price \$25 per acre; terms can be arranged. Address Postoffice Box 478, Jacksonville, Fla.

MISSISSIPPI.—3555 acres of good hill cotton land for sale; now in successful operation; well supplied with negro labor. The plantation lies between two branches of the Illinois Central R. R.; nearest shipping point four miles from the dwelling. The land corners within half mile of the shipping point. A sufficiency of cabins for tenants, stables, cribs, cotton pens and all outhouses; 45 head of mules and horses, cows, farming implements and feedstuff. Price very low; terms good. Address A. C. Leigh, Grenada, Miss., bona-fide owner.

ORANGE GROVES

ORANGE GROVES planted, cultivated and guaranteed for four years; \$500 per acre; \$50 down, \$10 monthly; no interest or taxes; 15 miles from New Orleans. N. J. Ciesl, 821 Gravier St., New Orleans.

FARM, FRUIT AND TRUCK LANDS

ALABAMA

FOR SALE.—Bargain—85 acres, 50 cleared, on Lookout Mountain; 2300 feet elevation; 1000 sure bearing peach trees; only \$1650, cash or half cash, if sold at once. W. S. Lide, Valley Head, Ala.

FARMS for sale in the celebrated Choccolocco and Alexandria valleys, Calhoun county, Ala. Fine land, good water, climate and roads, telephones, schools and churches make it ideal. Titles good. O. H. Parker & Company, Anniston, Ala.

FARM BARGAINS.—28 acres, 7 miles of courthouse; between 400 and 600 fruit trees, with heavy crop of fruit; peaches will be ripe in few weeks; practically all under cultivation and will make good truck farm; \$3500; this is a bargain.

80 acres in same neighborhood; 25 acres in cultivation; nice lot of fruit trees; 4-room house and outbuildings; \$7500.

40 acres in half mile of Mount Flow Spring, on Shades Mountain; \$2500.

80 acres in half mile of St. Clair Spring Hotel; unimproved; \$2250.

Can get terms on all above property. If you are looking for bargain in farm lands it will pay you to see me, as I have many others at prices equally as attractive. M. F. Webb, 301 Jefferson Co. Bank, Birmingham, Ala.

C. C. MECHEM, Bank of Mobile Building, Mobile, Ala., makes a specialty of handling small tracts of land on easy terms. He guarantees his titles in the Title Insurance Co. of Mobile, Alabama, charges no interest on deferred payments and pays all taxes until deed is delivered. Call and see him.

FLORIDA

FLORIDA FARM FOR SALE.—A snap if taken soon; 47 1/2 acres, two miles west Green Cove Springs; good buildings; 100 fruit trees; fourteen acres grape vineyard. Price \$1500. For particulars address T. L. Card, Green Cove Springs, Fla.

LOUISIANA

FOR SALE.—Southern Louisiana, 75,000 acres in solid body in Cameron and Vermilion parishes, near Intercoastal Canal, with great possibilities for development; river transportation to railroad; large portion of same now being used for pasturing cattle; all susceptible to reclamation; price only \$2.50 per acre; will sell 1/2 or 1/4 if desired. Perry Ulrich, 317 Title & Trust Bldg., Chicago, Ill.

TEXAS

I HAVE FOR SALE, in a body—no trading—15,382 acres of land. I challenge the world to show as valuable a property that can be purchased at the price asked for this. Send for description. W. H. Graham, Cuero, Tex.

FINE LANDS IN COAST COUNTRY.—RAIN BELT.—Soils, dark sandy loam and black bog-wallow; red clay subsoil; any size tract, 40 acres up; improved and unimproved; near two towns; two railroads; good schools and churches. Prices right. Terms reasonable. Southwestern Development & Land Co., San Antonio and Houston, Texas.

SAN ANTONIO, UVALDE & GULF RAILROAD, now building, will open the finest fruit and truck growing sections in the State. Strong flow of artesian water at shallow depth. We can supply small irrigated farms or colonization tracts. Opportunity to double your money within year. West Texas-Mexico Land Co., San Antonio, Texas.

VIRGINIA

FOR SALE.—Fine farm of 140 acres, on Broad Bay; good buildings; good soil; in high state of cultivation; boating, bathing, fishing, 50 acres in oysters, from which an annual revenue of \$2500 is derived from oysters alone. This property is near electric car line and is a bargain. Price \$25,000. L. Jackson, 215 Arcade Bldg., Norfolk, Va.

WEST VIRGINIA

BEARING APPLE ORCHARDS, orchard land, timber and mountain land for sale in West Virginia's famous fruit belt.

5000 acres choice fruit land, 1 1/4 mile from main line B. & O. R. R.; 1/2 mile from Western Maryland. Great opportunity. J. Walter O'Boyle, Bond Building, Washington, D. C.

WORN-OUT RUBBER BELTS WANTED

WANTED.—Discarded worn-out rubber belts and rubber-belt scrap; wide discarded leather belts. Atlantic Manufacturing Co., Wilmington, Del.

FINANCIAL

FOR SALE.—First mortgage real estate loan, secured by best-located acreage along the Interurban Line in the famous Houston-Galveston district, close to Houston. Address Box 385, Houston, Texas.

FOR SALE.—First mortgage 7% real estate bonds, secured by well-located Harris county property on Interurban Line. Address Box 1741, Houston, Texas.

FOR SALE.—I have for sale 8 per cent. mortgages on improved farms in North Louisiana; none better. W. A. Jones, authority on North Louisiana Lands, Shreveport, La.

FIRST MORTGAGE LOANS on Texas farm and ranch securities, based on 40% to 50% of actual value, unquestionably represent the highest security obtainable today. We have on hand well-secured first mortgage real estate loans taken with our own funds, bearing from 6% to 7% semi-annual interest, in amounts of \$500 and up. If you have idle money, investigate these securities. We personally inspect the property, examine the titles, know the men, and will collect the interest each year, also the principal when due, without charge to you. We lend money for individuals as well as mortgage companies. References: Any bank in San Antonio, or Bradstreet and Dun. Write Gilliam, Henry & Austen, Land Mortgage Bankers (unincorporated), Suite 633-640 Bedell Building, San Antonio, Texas.

\$300,000 FIRST MORTGAGE 8% BONDS for sale, secured by 10,000 acres fine onion and fruit land in South Texas; money to be used for developments and machinery; land when put under irrigation and cultivation will produce \$250 to \$300 per acre each year. Part or all can be had. Write to F. P. Bickelbach, El Paso, Texas.

FIRST MORTGAGE LOANS cautiously selected in Texas; 3 to 5 years, 8%, \$1000 to \$5000, to suit investors. Any well-informed man can tell you of the substantial values in Texas and the Southwest. This company was especially organized for this line of business and we give it most careful attention. First Mortgage Trust Company, San Antonio, Texas.

MORTGAGE LOANS, carefully selected, on good cotton and corn farms in Southern Oklahoma; 5-year, 8%, \$250 to \$2500, to suit investors. This country's population, 25,000; assessed values, \$10,000,000; one of largest cotton producers. Can place your money very safely; 25 years' experience; 10 years bank cashier here; intimately acquainted with lands, people, conditions; abundant references; circular. Write J. G. James, Roff, Okla.

WANTED.—Money in lumps from \$1000 to \$5000; can place several 8 per cent. first mortgages on city property at once; correspondence invited. T. Roy Young, Real Estate and Loan Agent, Tampa, Fla.

PATENT ATTORNEYS

EUGENE C. BROWN, ENGINEER and Patent Lawyer, Suite 40 Victor Building, Washington, D. C. Member Bar U. S. Supreme Court. Patents and Trademarks. Inventions are considered both from Engineering and Legal standpoints in my prosecution of patents. An experience of over 9 years as Examiner in U. S. Patent Office and over 6 years as Patent Expert in important patent suits are my special qualifications. Reports upon validity and infringement. Send sketch of invention for advice.

INVENTIVE GENIUS deserves reward. Patent does you no good unless sold. We undertake sale of patents obtained through our attorneys. Are splendidly located and equipped. Adam Fisher Mfg. Co., 88-14, St. Louis, Mo.

PATENTS THAT PROTECT. Careful, honest work in every case. Patent your ideas; they may bring you wealth. 64-page book free. FitzGerald & Co., 317 F street, Washington, D. C. Established 1878. Send for our book.

PATENTS THAT PROTECT AND PAY. Advice and books free. Highest references. Best results. Promptness assured. Send sketch or model for free search of Patent Office records. Trade-marks registered. Watson E. Coleman, Patent Lawyer, 624 F. St., Washington, D. C.

PATENT YOUR IDEAS.—\$100,000 offered for one invention, \$8500 for another; book, "How to Obtain a Patent" and "What to Invent," sent free; send rough sketch for free report as to patentability; patent obtained or fee returned. We advertise your patent for sale at our expense. Chandiee & Chandiee, patent attorneys, 578 F street, Washington, D. C.

PATENTS secured or Fee returned. Send sketch for free report as to patentability. Guide book and what to invent, with valuable list of inventions wanted, sent free; \$1,000,000 offered for one invention; \$16,000 for others. Patents secured by us advertised free in World's Progress; sample free. Victor J. Evans & Co., Washington, D. C.

PROPOSALS

PUBLIC BUILDINGS.

CONSTRUCTION BONDS

MISCELLANEOUS.

GOVERNMENT PROPOSALS

PROPOSALS FOR STRUCTURAL STEEL
Rivets and Wrought-iron or Steel Pipe.
Sealed proposals will be received at the office of the General Purchasing Officer, Isthmian Canal Commission, Washington, D. C., until 10:30 A. M. July 15, 1912, at which time they will be opened in public, for furnishing the above-mentioned articles. Blanks and general information relating to this Circular (No. 717) may be obtained from this office or the offices of the Assistant Purchasing Agents, 24 State Street, New York City; 614 Whitney-Central Building, New Orleans, La., and 1086 North Point Street, San Francisco, Cal.; also from the U. S. Engineer Offices in the following cities: Seattle, Wash.; Los Angeles, Cal.; Baltimore, Md.; Philadelphia, Pa.; Pittsburgh, Pa.; Boston, Mass.; Buffalo, N. Y.; Cleveland, Ohio; Cincinnati, Ohio; Chicago, Ill.; St. Louis, Mo.; Detroit, Mich.; Milwaukee, Wis.; St. Paul, Minn.; Chattanooga, Tenn.; Louisville, Ky.; Mobile, Ala., and Galveston, Tex.; Commercial Club, Kansas City, Mo.; Chamber of Commerce, Quincy, Ill., and Commercial Club, Tacoma, Wash. F. C. BOGGS, Major, Corps of Engineers, U. S. A., General Purchasing Officer.

TREASURY DEPARTMENT, Office of the Supervising Architect, Washington, D. C., June 21, 1912. Sealed proposals will be received in this office until 3 o'clock P. M. on the 2d day of August, 1912, and then opened, for the construction (including plumbing, heating apparatus, gaspiping, electric conduits and wiring, and interior lighting fixtures) of the extension, remodeling, etc., of the United States postoffice and courthouse at Charlotte, N. C. The extension is two stories and basement, stone faced, of fireproof construction (except roof), and has a ground area of approximately 12,600 square feet. Drawings and specifications may be obtained from the custodian of site at Charlotte, N. C., or at this office, at the discretion of the Supervising Architect. JAMES KNOX TAYLOR, Supervising Architect.

TREASURY DEPARTMENT, Office of the Supervising Architect, Washington, D. C., June 15, 1912. Sealed proposals will be received in this office until 3 o'clock P. M. on the 6th day of August, 1912, and then opened, for the construction, complete (including plumbing, gaspiping, heating apparatus, electric conduits and wiring, and interior lighting fixtures and approaches), of the United States Postoffice at Carrollton, Ga. The building is of two stories and basement and has a ground area of approximately 3,800 square feet, non-fireproof construction, stone, brick, and stucco facing, terra-cotta cornice and tin roof. Drawings and specifications may be obtained from the custodian of site at Carrollton, Ga., or at this office, at the discretion of the Supervising Architect. JAMES KNOX TAYLOR, Supervising Architect.

TREASURY DEPARTMENT, Office of the Supervising Architect, Washington, D. C., June 24, 1912. Sealed proposals will be received at this office until 3 o'clock P. M. on the 22d day of July, 1912, and then opened, for the construction (including plumbing, gaspiping, heating apparatus, electric conduits and wiring, interior lighting fixtures and approaches) of the United States Postoffice at Hanover, Pennsylvania. The building is of one story, basement and mezzanine, and has a ground area of approximately 4,900 square feet, fireproof construction throughout, stone facing and copper roof. Drawings and specifications may be obtained from the custodian of site at Hanover, Pa., or at this office, at the discretion of the Supervising Architect. JAMES A. WETMORE, Acting Supervising Architect.

TREASURY DEPARTMENT, Office of the Supervising Architect, Washington, D. C., June 14, 1912. Sealed proposals will be received at this office until 3 o'clock P. M. on the 26th day of July, 1912, and then opened, for the construction, including plumbing, gaspiping, heating apparatus, electric conduits and wiring, and interior lighting fixtures, of the extension, remodeling, etc., of the United States Postoffice at Oil City, Pa., the extension to be one story and basement of approximately 1,227 square feet ground area; stone faced; tin roof; fireproof construction. Drawings and specifications may be obtained from the custodian of site at this office at the discretion of the Supervising Architect. JAMES KNOX TAYLOR, Supervising Architect.

U. S. ENGINEER OFFICE, Galveston, Texas, June 19, 1912. Sealed proposals for furnishing about 6000 barrels American Portland cement for Lock and Dam No. 8, Brazos River, delivered at Downs, Texas, will be received at this office until 12 M. July 19, 1912, and then publicly opened. Information on application. EARL I. BROWN, Major, Engrs.

U. S. ENGINEER OFFICE, Galveston, Texas, June 19, 1912. Sealed proposals for crushed rock or gravel, delivered at Downs, Texas, will be received at this office until 12 M. July 19, 1912, and then publicly opened. Information on application. EARL I. BROWN, Major, Engrs.

NEW BOND OFFERINGS

\$33,000 5% Bonds For Sale

Plaquemine, La.
The Bond Committee of the Iberville Parish School Board will receive sealed bids up to noon July 10, 1912, for the sale of \$33,000 5 per cent. school bonds, based on a special school tax for twenty years, with interest payable semi-annually. Bids should be sent to the office of the parish superintendent, Plaquemine, La., and with each bid is required a certified check for \$1000.
L. E. MESSICK,
Supt. Iberville Parish.

\$40,000 5% Bonds

Hillsboro, Tex., June 19, 1912.
Sealed bids will be received up to 8 o'clock P. M. July 16, 1912, by the City Council of Hillsboro, Texas, for \$40,000 5 per cent. 40-year coupon bonds with 20-year option. Said bonds, dated July 1, 1912, to be issued in denominations of \$1000 each, and are issued for the purpose of erecting a grammar-school building. Interest payable semi-annually on July 1 and January 1 as it accrues. Said bonds to be in accordance with the laws of the State and approved by the Attorney-General. Each and every bid must be accompanied by a certified check for 3 per cent. of amount of bid. For further information, financial statement, etc., address J. D. Tomlinson, Mayor, Hillsboro, Texas. These bonds offer a very fine opportunity for investment.
Right reserved to reject any and all bids.
J. D. TOMLINSON, Mayor.

\$30,000 Town of Carthage (N. C.) Bonds

Sealed bids will be received by the Town of Carthage, N. C., up to 2 o'clock P. M. July 16, 1912, for the purchase of \$30,000 Carthage, N. C., water and sewerage bonds, payable 30 years from date, in denominations of \$1000 each, dated July 1, 1912, bearing interest at 6 per cent., payable annually on January 1 in each year at the office of Treasurer.
A certified check equal to 10 per cent. of the amount bid, drawn payable to Treasurer of town, will be required to accompany each proposal.
Specifications can be obtained from the undersigned and maps and plans can be seen at the office of the Mayor of said town.
Right is reserved to reject any or all bids. Proposals should be directed to the undersigned.
W. G. JENNINGS,
Secretary, Carthage, N. C.

Sale of \$50,000 of 4 1/2% 30-Year Bonds by the City of Danville, Virginia

Sealed proposals will be received by W. T. Swann, Chairman of the Finance Committee, until July 8, 1912, at 12 o'clock M., for the purchase of \$50,000 refunding bonds, dated August 1, 1912, maturing August 1, 1942, and bearing interest at 4 1/2 per cent., payable semi-annually.
Each proposal to be accompanied by a certified check for \$500, payable to the Treasurer of the City of Danville, Va., as a guarantee for the purchase of the bonds within ten days from date of acceptance of the bid.
The right is reserved to reject any or all bids.
ROBERT BRYDON, Auditor.

\$200,000 City of St. Petersburg (Fla.), Improvement Bonds

Sealed bids will be received by the City Council at the office of W. F. Divine, City Clerk, until 7 P. M. July 25, 1912, for the purchase of \$200,000 six per cent. Improvement Bonds.
Bids are desired for the whole issue, or any fractional part thereof in amounts not less than \$5000.
These bonds will be of the denomination of \$1000 each, and payable, principal and interest, at the office of the City Treasurer, in St. Petersburg, or in New York City, at the option of the holders, in gold coin of the present weight and fineness.
Due thirty years from date. Interest on said bonds to be paid semi-annually. Bonds to be dated August 1, 1912.
Each bidder is required to accompany his bid with a certified check for \$500.
No bids for less than par value and accrued interest will be entertained.
City reserves right to reject any and all bids. Address
W. F. DIVINE,
City Clerk.

Bonds for Sale

The County Commissioners for Montgomery County, Maryland, will receive sealed bids for the purchase of 24 Montgomery county bonds of \$500 each, up to twelve o'clock noon on the 16th day of July, A. D. 1912, at which time the bids will be opened by said Commissioners and the sale consummated to the highest bidder for cash, if in the opinion of the said County Commissioners such highest bid be an adequate price for said bonds.

These bonds are in a series of 24 bonds of \$500 each, aggregating \$12,000, and numbered from one to twenty-four, both inclusive, and two of said bonds, being numbered one and two, both being payable one year after the date thereof, and two of said bonds, in order of their number, being payable each year until the entire issue of twenty-four are fully paid.

These bonds and coupons bear interest at the rate of four and one-half per centum per annum.

Said interest being paid semi-annually on the first day of February and August in each year until the payment of the principal sum.
The principal and interest being payable to the Farmers' Banking & Trust Co. of Montgomery County, at Rockville, Maryland.
Each bid must be accompanied with a certified check for two hundred dollars, made payable to the County Commissioners of Montgomery County, Maryland.
JOSEPH T. WHITE,
President of the Board
of County Commissioners
for Montgomery County, Maryland.

BERRY E. CLARK,
Clerk of the County Commissioners
for Montgomery County, Maryland.

JOHN A. GARRETT, Solicitor.

Bonds for Sale

The County Commissioners for Montgomery County will receive sealed bids for the purchase of thirty-five Montgomery county bonds of one thousand dollars each, up to twelve o'clock noon on the 16th day of July, A. D. 1912, at which time the same will be opened by said County Commissioners and the sale consummated to the highest bidder for cash, if in the opinion of the said County Commissioners such highest bid be an adequate price for said bonds.

These bonds are in a series of thirty-five bonds of one thousand dollars each, aggregating thirty-five thousand dollars, and numbered from one to thirty-five, both inclusive; one of said bonds, being bond number one, being payable one year after the date thereof, and one of said bonds, in order of their number, being payable in each year until the entire issue of thirty-five are fully paid.

These bonds are coupon bonds and bear interest at the rate of four and one-half per centum per annum. Interest being payable annually on the first day of July in each year until the payment of the principal sum.
The principal sum and interest being payable to the Farmers' Banking & Trust Company of Montgomery County, at Rockville, Maryland.

Each bid must be accompanied with a certified check for two hundred dollars, made payable to the County Commissioners.
By order of the Board of County Commissioners for Montgomery County, Maryland.
JOSEPH T. WHITE,
President of the Board
of County Commissioners
for Montgomery County, Maryland.

BERRY E. CLARK,
Clerk to the County Commissioners
of Montgomery County.

JOHN A. GARRETT, Solicitor.

Notice of Bond Sale

Notice is hereby given that sealed bids will be received by the Board of Supervisors of Monroe county, Mississippi, at Aberdeen, Miss., for the sale of the road bonds of Supervisor's District Number Five, of said county, in the sum of fifty thousand dollars (\$50,000), up to and until two o'clock P. M. of Monday, July 1, A. D. 1912, when said bids will be opened in open session of said Board. Said bonds shall be dated July 1, 1912, and shall be of the denomination of five hundred dollars (\$500) each, numbered from one to one hundred (100), inclusive, bearing interest at the rate of five per centum per annum, payable annually, both principal and interest payable at the office of the County Treasurer of Monroe county, at Aberdeen, Miss., or, at the option of the holder, at the Seaboard National Bank of the city and State of New York. And the principal of said bonds shall be paid in the following manner: Bonds numbered one to fourteen (14), inclusive, shall mature eleven (11), twelve (12), thirteen (13), fourteen (14), fifteen (15), sixteen (16), seventeen (17), eighteen (18), nineteen (19), twenty (20), twenty-one (21), twenty-two (22), twenty-three (23), twenty-four (24) years after July 1, 1912, the date of issuance, and all the other bonds shall mature twenty-five (25) years after July 1, 1912.
These bonds are exempt from all taxes within the State of Mississippi. No bid for less than par and accrued interest after July 1, 1912, will be considered; and all proposals must be accompanied with certified check, payable to G. G. Ray, Clerk, or order, in the sum of fifteen hundred dollars (\$1500), drawn on some solvent bank or trust company doing a commercial business. The Board reserves the right to reject any and all bids.
Witness my hand at Aberdeen, Miss., this 6th day of June, A. D. 1912.
G. G. RAY,
Clerk of the Board of Supervisors
Monroe County, Mississippi.

Bonds for Sale

There has been an authorized bond issue of \$150,000 of 25-year 5 per cent. District No. 1 Bonds of Noxubee county, Mississippi, \$50,000 of which will be sold on Monday, July 1, 1912, at 2 o'clock P. M.

For further particulars apply to the undersigned Clerk.

JOHN A. TYSON,
Clerk Board Supervisors, Noxubee
County, Mississippi, P. O. Macon, Miss.

PAVING

Notice to Paving Contractors

Greenwood, Miss.
By order of the Mayor and Board of Aldermen, City of Greenwood, Miss., sealed bids will be received until twelve o'clock noon Tuesday, July 24 (second), 1912 (nineteen hundred and twelve), for furnishing all materials and completing the following work:
25,182 sq. yds. of street paving, as follows:
Vitritified Brick.
Bitulthite or Creosoted Wood Blocks.
10,500 lineal feet of Concrete Curb Gutter.
2,000 lineal feet of Granite Header.
2,000 cu. yds. of Excavation.

Plans and specifications may be obtained from City Clerk or J. S. Allen, City Engineer. The city reserves the right to reject any or all bids or any part thereof.
R. H. HICKS,
City Clerk.

Road Construction

Crossville, Tenn., June 15, 1912.
Sealed proposals will be received by the Cumberland County Highway Commission until 3 o'clock P. M. July 10, 1912, at their office, Courthouse Building, for the construction of approximately 35 miles of road in Cumberland county, same being a part of the Memphis-to-Bristol Highway in said county. The work will consist of approximately:
75,000 cu. yds. Excavation.
1,200 cu. yds. Rubble Masonry.
100 cu. yds. Concrete Masonry.
1,800 lin. ft. Corrugated Pipe.
4,000 lin. ft. D. S. Vitritified Pipe.

Plans and specifications are on file at the office of the engineer, O. W. Monroe, Crossville, Tenn.
Each bid must be accompanied by a certified check of \$250.
The Commission reserves the right to reject any or all bids.
O. W. MONROE, Chairman.
H. C. SABINE, Secretary.

Paving, Retaining Wall and Culvert

NOTICE TO CONTRACTORS.

Paducah, Ky., June 18, 1912.
Separate sealed proposals will be received by the Board of Public Works until 10 o'clock A. M. Monday, July 1, 1912, for the following work:

Contract "A"—Sidewalks, etc.
Approximate quantities:
Concrete Sidewalks.....26,000 sq. ft.
Concrete Driveways.....1,500 sq. ft.
Concrete Gutters.....4,500 lin. ft.
Granite Curbing.....5,000 lin. ft.
Cast-Iron Drain Pipe.....200 lin. ft.

Contract "B"—Reinforced Concrete Retaining Wall.
Approximate quantities:
Excavation.....750 cu. yds.
Reinforced Concrete.....250 cu. yds.
Reinforcing Steel.....23,000 lbs.
Gaspipe Fence.....55 ft.
Drain Tile and Pipe.....290 ft.

Contract "C"—Reinforced Concrete Culvert.
Approximate quantities:
Excavation.....175 cu. yds.
Reinforced Concrete.....155 cu. yds.
Reinforcing Steel.....21,000 lbs.

Each proposal must be accompanied with a certified check for \$50 as evidence of good faith upon the part of the bidder, and the successful bidder will be required to give a satisfactory bond to the amount of forty per cent. (40%) of his bid for the faithful performance of his contract.

On contract "A" an additional bond of twenty-five per cent. (25%) of the cost of the work must be executed upon its completion as a guarantee of maintenance for five (5) years.

The right is reserved to reject any and all bids, to waive defects in bids, or to accept any bid deemed for the best interest of the city.

For information address L. A. Washington, City Engineer.
By order of the Board of Public Works.
L. A. WASHINGTON,
City Engineer.

BRIDGES

Steel Bridge

Kissimmee, Fla.
Notice is hereby given that the Board of County Commissioners of Osceola County, Florida, will receive sealed bids for the construction of a Steel Bridge over Canoe Creek, Osceola county, Florida, at their next regular meeting, July 1, A. D. 1912. Plans and specifications on file Clerk's office. All bids to be addressed to R. G. Johnston, Clerk Circuit Court, Kissimmee, Florida.
The Commissioners reserve the right to reject any and all bids.

Bridge

The County Court of Randolph County, West Virginia, will receive bids until July 11, inclusive, for the construction of a bridge and abutments to span the Tygart's Valley River at Mill Creek; span 105, roadway 14 ft. Bids separate or combined will be received for the construction of either a steel or concrete bridge with either stone or concrete abutments.

Address County Clerk, Elkins, W. Va.

Bridges

The County Board of Commissioners for Dillon County will receive bids until noon of Wednesday, July 10, for furnishing all material and labor and constructing two reinforced concrete bridges across Little Pee Dee River, plans for which will be on file with the Clerk of Board by July 1. Alternate bids for steel superstructure on same reinforcing substructure, accompanied by complete plans of steel work, will be considered. Spans of bridges are 84 feet and 45 feet, latter being on 45 degrees skew. Right reserved to reject any and all bids.

R. L. MOODY,
Clerk.
EDWIN M. WAYLAND,
Engineer.

PUBLIC BUILDINGS**Sealed Proposals for Erecting and Completion of a Courthouse Building for Rowan County, North Carolina**

TO BE ERRECTED IN SALISBURY, NORTH CAROLINA, ON A LOT ADJOINING THE PRESENT COURTHOUSE AND TO THE NORTH OF SAME.

1. Sealed proposals addressed to the Chairman of the Board of Commissioners of Rowan County, North Carolina, will be received up to twelve o'clock noon July 8, 1912, for furnishing all labor and material for the erection and completion of a two-story-and-a-half Courthouse, all as more minutely shown and described in the plans and specifications on file and open for inspection at the office of the Board of County Commissioners, Salisbury, North Carolina, and at the office of A. Ten Eyck Brown, Architect, 405 Forsyth Building, Atlanta, Ga. All bids to be endorsed "Proposals for Erection and Completion of a Courthouse for Rowan County, North Carolina, at Salisbury, North Carolina."

2. Copies of drawings and specifications may be obtained from the above Architect upon deposit of a certified check for \$20 for each set. Said check to be returned to the maker upon the return of the drawings and specifications in good condition and the submission of a bona-fide bid, as hereinafter and hereinafter called for. Subcontractors will be furnished with copies of drawings and specifications upon deposit of a certified check for \$10, \$5 of which will be returned upon receipt of the drawings and specifications in good condition, the remaining \$5 being held to cover expense of reproduction.

3. All bids must be submitted on special proposal blanks furnished by the Architect or they will not be considered, and accompanied by a certified check for two per cent. of total amount of bid, made payable to the Chairman of the Board of County Commissioners of Rowan County, as a guarantee that the successful bidder will enter into a contract according to said plans and specifications and execute a bond for double the amount of contract within ten days after the notification of the acceptance of the bid, failing which said certified check shall be forfeited to the Board of County Commissioners of Rowan County, North Carolina, as liquidated damages.

4. Bidders will be required to furnish sufficient evidence of their ability and experience in this class of work, and must possess proper resources to carry out the work satisfactorily to the Board of County Commissioners and the aforesaid architect.

5. This work for which above proposals are requested must commence on the site not later than July 15, 1912, and be completed within the contract time as specified in the contract with the successful bidder.

6. Payments will be made on the certificate of the Architect on the first day of each and every month during the time of the contract, being eighty-five per cent. of the value of the work furnished and erected, provided the contractor has made application over his signature for said certificate on or before the 15th day of the preceding month, and that a schedule of material and labor in place has been furnished with the estimate. A certificate will be given by the Architect for the balance of fifteen per cent. upon completion of the contract in conformity with plans and specifications, application having been made as above.

7. Each bid shall be signed with the full name of the bidder, and if a company or corporation, by the full name of each partner or officer.

8. The Board of County Commissioners of Rowan County, North Carolina, reserve the right to reject any or all proposals.

By order of the Board of County Commissioners of Rowan County, North Carolina.
(Signed) P. B. BEARD,
Chairman Board of Commissioners
Rowan County, N. C.
Attest:
E. H. MILLER,
Clerk Board of Commissioners
Rowan County, N. C.

Building**NOTICE TO CONTRACTORS.**

Sealed proposals for building contract and contracts for heating, plumbing and wiring for Educational Building located at the University, Mississippi, will be received until 10 o'clock A. M. Thursday, July 27, 1912, at University P. O., University, Miss., and then opened. Plans to be had from office of Ben Price, 518-19 Empire Building, Birmingham, Ala., on and after June 29, 1912. Fifteen-dollar (\$15) deposit required for plans, guaranteeing their return within two weeks from date of issue. Three-hundred-dollar (\$300) certified check to accompany proposal on building contract; seventy-five-dollar (\$75) certified check each for proposal on heating, plumbing and wiring. Right reserved to reject any or all bids. Address
O. F. LAWRENCE,
Secy. of Trustees,
University P. O., Miss.

Courthouse**NOTICE TO CONTRACTORS.**

Quincy, Fla.
Sealed proposals will be received at the office of the County Commissioners of Gadsden County at Quincy, Florida, until 2 o'clock P. M. on July 1, 1912, and then opened, for the construction complete (including heating, plumbing, wiring, lighting fixtures, finishing hardware, clock and bell for dome, furniture, etc.) of a courthouse at Quincy Florida. Concrete and brick construction. Drawings and specifications may be obtained from the Architects, Hentz & Reid, at their Atlanta office, 933 Candler Building.

A deposit of \$15, guaranteeing the safe return of drawings, must be sent with application for drawings; this to be returned on safe return of drawings to architects.

The County Commissioners reserve the right to reject any and all bids.

T. R. CANTEY,
Clerk Bd. Co. Coms.

Alterations and Additions to Courthouse and Jail**NOTICE.**

The State of Texas,
County of Pecos, }

Fort Stockton, Texas, June 20, 1912.

Notice is hereby given that sealed proposals will be received from contractors by the County Commissioners' Court of Pecos County, Texas, in Fort Stockton, Texas, July 15, 1912, all bids to be on file with the County Clerk at 9 o'clock A. M. on said date, to build certain alterations and additions to the Courthouse and Jail of Pecos county, according to plans and specifications now on file with the County Clerk of Pecos county, Texas, at Fort Stockton, Texas.

Bids will not be considered unless they are accompanied by a certified check or draft in the sum of \$3000, made payable to John M. Odum, County Judge. Such check or draft to be subject to forms and conditions described in specifications for said Courthouse and Jail building, and will be held by the County Commissioners' Court until 25 per cent. of the work contracted for has been completed.

The successful bidder will also be required to give bond with some incorporated surety company authorized to do business in the State of Texas, and for the amount of this contract.

Plans and specifications can be seen at the office of the County Clerk of Pecos county, Texas, or at the office of the Architect, the Falls City Construction Company, Louisville, Kentucky. A copy of said plans and specifications may be obtained by addressing the Falls City Construction Company at Louisville, Ky., accompanied by certified check for the sum of \$25.

The successful bidder will be paid for this work in county scrip, or 6 per cent. interest-bearing warrants, falling due in installments annually until the entire debt is fully paid, and as may be provided for by contract.

The right to reject any and all bids is reserved.

Advertised by order of the Honorable County Commissioners' Court of Pecos County, Texas.

Given under my hand and seal of office, at the office in Fort Stockton, Texas, on this the 20th day of June, A. D. 1912.

FRANK ROONEY,
Clerk of County Court, Pecos County, Texas.

MISCELLANEOUS**Sanitary Sewer System**

Monroe, N. C., June 20, 1912.

The city of Monroe, N. C., will receive sealed proposals for the construction of a sanitary sewer system, at the office of the City Clerk, until five o'clock P. M. Monday, July 15, 1912, when they will be opened and read.

The City Council reserves the right to reject any and all bids.

Plans and specifications are now on file with the City Clerk.

Southern States Engineering Co. of Memphis, Tenn., are consulting engineers.

P. H. JOHNSON, City Clerk.
J. E. EFIRD, Mayor.

Gas Franchise For Sale

St. Petersburg, Fla.

Sealed bids will be received by the City Council of the City of St. Petersburg, Fla., at the office of W. F. Divine, City Clerk, until 7:30 P. M. July 3, 1912, for the purchase of Gas Franchise.

Each bidder is required to accompany his bid with a certified check for \$1000, and each must comply with the specifications of the franchise. Copy of franchise will be furnished on application.

W. F. DIVINE,
City Clerk.

Proposals for Dredging

May 30, 1912.

Sealed bids addressed to J. H. Neims, Chairman, will be received at the office of the Engineer, Room 430 New Weinberg Building, Greenville, Miss., by the Board of Washington County Drainage Commissioners, to 12 M. July 15, 1912, for the construction of about nineteen miles of dredge ditch, ranging from twenty-six to fifty-six feet bottom; approximate quantities, 1,900,000 cubic yards. Also for the clearing of two natural streams aggregating about seventeen miles. Plans, profiles and specifications are on file at the office of the Engineer, and can be furnished on application. A certified check for \$5000 must accompany each bid. The right is reserved to reject any or all bids, or to let the work as may appear to be for the best interest of the district.

THE WASHINGTON COUNTY DRAINAGE COMMISSIONERS.

B. B. GORDON, Chief Engineer.
Greenville, Miss.

Water and Sewerage Construction

Sealed proposals will be received by the Board of Commissioners of the Town of Carthage, N. C., until July 16, 1912, at 2 o'clock P. M., for the construction of a system of water-works and sewerage in said town.

Specifications can be obtained from the undersigned and plans and maps can be seen at the office of the Mayor of said town.

A certified check equal to 10 per cent. of the amount of bid, drawn payable to the Treasurer of said town, will be required to accompany each bid.

Bids should be addressed to the undersigned.

Right is reserved to reject any or all bids.

W. G. JENNINGS,
Secretary, Carthage, N. C.

Notice to Contractors of the Letting of Drainage Contract

Notice is hereby given that sealed bids will be received by the Board of Commissioners of the Camden Run Drainage District, at the office of Dr. Samuel W. Gregory, in Elizabeth City, N. C., until the hour of two o'clock P. M. on Tuesday, the 23d day of July, 1912, for the construction of about sixteen (16) miles of drainage canals for said drainage district, according to plans and specifications now on file in the office of the Clerk of the Superior Court of Camden County, N. C. Said canals vary from six (6) to about eleven (11) feet in depth, from fourteen (14) to thirty (30) feet in bottom width, with bank slope of one-half to one. The engineer's estimate of the cost of the work is: Clearing 15.7 miles right of way, \$290 per mile; excavating 538,132 cubic yards of earth at 8c.; building bridges, \$225; total, \$46,415.56.

Said work must begin not later than October 1, 1912, and shall be completed within sixteen (16) months from that time. Each bid must be accompanied with a certified check for five hundred dollars (\$500), payable to the order of the above Board of Commissioners, and the successful bidder will be required to enter into a contract with said Board of Commissioners within ten days after said contract is awarded, and shall execute a bond for the faithful performance of such contract, with sufficient sureties to the satisfaction of said Board, in favor of said Board of Commissioners, for the use and benefit of said Drainage District, in an amount equal to 25 per cent. of the amount of his bid, or forfeit the \$500 deposited with his bid, as liquidated damages. All other checks will be returned the day the contract is awarded. Bids exceeding the engineer's estimate cannot be considered. The Board reserves the right to reject any and all bids. Address all communications to S. W. Gregory, Elizabeth City, N. C., Secretary of the Board of Commissioners of the Camden Run Drainage District, Elizabeth City, N. C.

Said work must begin not later than October 1, 1912, and shall be completed within sixteen (16) months from that time. Each bid must be accompanied with a certified check for five hundred dollars (\$500), payable to the order of the above Board of Commissioners, and the successful bidder will be required to enter into a contract with said Board of Commissioners within ten days after said contract is awarded, and shall execute a bond for the faithful performance of such contract, with sufficient sureties to the satisfaction of said Board, in favor of said Board of Commissioners, for the use and benefit of said Drainage District, in an amount equal to 25 per cent. of the amount of his bid, or forfeit the \$500 deposited with his bid, as liquidated damages. All other checks will be returned the day the contract is awarded. Bids exceeding the engineer's estimate cannot be considered. The Board reserves the right to reject any and all bids. Address all communications to S. W. Gregory, Elizabeth City, N. C., Secretary of the Board of Commissioners of the Camden Run Drainage District, Elizabeth City, N. C.

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Said work must begin not later than October 1, 1912, and shall be completed within sixteen (16) months from that time. Each bid must be accompanied with a certified check for five hundred dollars (\$500), payable to the order of the above Board of Commissioners, and the successful bidder will be required to enter into a contract with said Board of Commissioners within ten days after said contract is awarded, and shall execute a bond for the faithful performance of such contract, with sufficient sureties to the satisfaction of said Board, in favor of said Board of Commissioners, for the use and benefit of said Drainage District, in an amount equal to 25 per cent. of the amount of his bid, or forfeit the \$500 deposited with his bid, as liquidated damages. All other checks will be returned the day the contract is awarded. Bids exceeding the engineer's estimate cannot be considered. The Board reserves the right to reject any and all bids. Address all communications to S. W. Gregory, Elizabeth City, N. C., Secretary of the Board of Commissioners of the Camden Run Drainage District, Elizabeth City, N. C.

Said work must begin not later than October 1, 1912, and shall be completed within sixteen (16) months from that time. Each bid must be accompanied with a certified check for five hundred dollars (\$500), payable to the order of the above Board of Commissioners, and the successful bidder will be required to enter into a contract with said Board of Commissioners within ten days after said contract is awarded, and shall execute a bond for the faithful performance of such contract, with sufficient sureties to the satisfaction of said Board, in favor of said Board of Commissioners, for the use and benefit of said Drainage District, in an amount equal to 25 per cent. of the amount of his bid, or forfeit the \$500 deposited with his bid, as liquidated damages. All other checks will be returned the day the contract is awarded. Bids exceeding the engineer's estimate cannot be considered. The Board reserves the right to reject any and all bids. Address all communications to S. W. Gregory, Elizabeth City, N. C., Secretary of the Board of Commissioners of the Camden Run Drainage District, Elizabeth City, N. C.

Said work must begin not later than October 1, 1912, and shall be completed within sixteen (16) months from that time. Each bid must be accompanied with a certified check for five hundred dollars (\$500), payable to the order of the above Board of Commissioners, and the successful bidder will be required to enter into a contract with said Board of Commissioners within ten days after said contract is awarded, and shall execute a bond for the faithful performance of such contract, with sufficient sureties to the satisfaction of said Board, in favor of said Board of Commissioners, for the use and benefit of said Drainage District, in an amount equal to 25 per cent. of the amount of his bid, or forfeit the \$500 deposited with his bid, as liquidated damages. All other checks will be returned the day the contract is awarded. Bids exceeding the engineer's estimate cannot be considered. The Board reserves the right to reject any and all bids. Address all communications to S. W. Gregory, Elizabeth City, N. C., Secretary of the Board of Commissioners of the Camden Run Drainage District, Elizabeth City, N. C.

Said work must begin not later than October 1, 1912, and shall be completed within sixteen (16) months from that time. Each bid must be accompanied with a certified check for five hundred dollars (\$500), payable to the order of the above Board of Commissioners, and the successful bidder will be required to enter into a contract with said Board of Commissioners within ten days after said contract is awarded, and shall execute a bond for the faithful performance of such contract, with sufficient sureties to the satisfaction of said Board, in favor of said Board of Commissioners, for the use and benefit of said Drainage District, in an amount equal to 25 per cent. of the amount of his bid, or forfeit the \$500 deposited with his bid, as liquidated damages. All other checks will be returned the day the contract is awarded. Bids exceeding the engineer's estimate cannot be considered. The Board reserves the right to reject any and all bids. Address all communications to S. W. Gregory, Elizabeth City, N. C., Secretary of the Board of Commissioners of the Camden Run Drainage District, Elizabeth City, N. C.

Said work must begin not later than October 1, 1912, and shall be completed within sixteen (16) months from that time. Each bid must be accompanied with a certified check for five hundred dollars (\$500), payable to the order of the above Board of Commissioners, and the successful bidder will be required to enter into a contract with said Board of Commissioners within ten days after said contract is awarded, and shall execute a bond for the faithful performance of such contract, with sufficient sureties to the satisfaction of said Board, in favor of said Board of Commissioners, for the use and benefit of said Drainage District, in an amount equal to 25 per cent. of the amount of his bid, or forfeit the \$500 deposited with his bid, as liquidated damages. All other checks will be returned the day the contract is awarded. Bids exceeding the engineer's estimate cannot be considered. The Board reserves the right to reject any and all bids. Address all communications to S. W. Gregory, Elizabeth City, N. C., Secretary of the Board of Commissioners of the Camden Run Drainage District, Elizabeth City, N. C.

Said work must begin not later than October 1, 1912, and shall be completed within sixteen (16) months from that time. Each bid must be accompanied with a certified check for five hundred dollars (\$500), payable to the order of the above Board of Commissioners, and the successful bidder will be required to enter into a contract with said Board of Commissioners within ten days after said contract is awarded, and shall execute a bond for the faithful performance of such contract, with sufficient sureties to the satisfaction of said Board, in favor of said Board of Commissioners, for the use and benefit of said Drainage District, in an amount equal to 25 per cent. of the amount of his bid, or forfeit the \$500 deposited with his bid, as liquidated damages. All other checks will be returned the day the contract is awarded. Bids exceeding the engineer's estimate cannot be considered. The Board reserves the right to reject any and all bids. Address all communications to S. W. Gregory, Elizabeth City, N. C., Secretary of the Board of Commissioners of the Camden Run Drainage District, Elizabeth City, N. C.

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Said work must begin not later than October 1, 1912, and shall be completed within sixteen (16) months from that time. Each bid must be accompanied with a certified check for five hundred dollars (\$500), payable to the order of the above Board of Commissioners, and the successful bidder will be required to enter into a contract with said Board of Commissioners within ten days after said contract is awarded, and shall execute a bond for the faithful performance of such contract, with sufficient sureties to the satisfaction of said Board, in favor of said Board of Commissioners, for the use and benefit of said Drainage District, in an amount equal to 25 per cent. of the amount of his bid, or forfeit the \$500 deposited with his bid, as liquidated damages. All other checks will be returned the day the contract is awarded. Bids exceeding the engineer's estimate cannot be considered. The Board reserves the right to reject any and all bids. Address all communications to S. W. Gregory, Elizabeth City, N. C., Secretary of the Board of Commissioners of the Camden Run Drainage District, Elizabeth City, N. C.

Sealed Proposals for Furnishing and Installing Wood and Metal Furniture in Courthouse for Rowan County, North Carolina

1. Sealed proposals addressed to the Chairman of the Board of County Commissioners of Rowan County, North Carolina, will be received up to twelve o'clock noon July 8, 1912, for furnishing and installing in place wood and metal furniture as more minutely described and shown in the plans and specifications for same on file and open for inspection at the office of the said Board of County Commissioners at Salisbury, North Carolina, and at the office of A. Ten Eyck Brown, Architect, 607 to 610 Forsyth Building, Atlanta, Ga. Proposals for the wood furniture will be made separately and shall be endorsed as follows: "Proposals for furnishing and installing wood furniture in the Rowan County Courthouse, Salisbury, North Carolina." Proposals for the metal furniture shall be made separately and shall be endorsed as follows: "Proposals for furnishing and installing metal furniture in the Rowan County Courthouse, Salisbury, North Carolina."

2. Copies of drawings and specifications may be obtained from the above Architect on application in the discretion of said Architect.

3. All bids must be submitted as directed by the Architect and accompanied by a certified check for two per cent. for each proposal, made payable to the Chairman of the Board of County Commissioners, as a guarantee that the successful bidder will enter into a contract according to said plans and specifications and execute a bond as called for within ten days after notification of acceptance of bid, failing which said certified check shall become forfeited to the Board of County Commissioners of said County as liquidated damages.

4. Payment for each of the above classes of work will be made upon the certificate of the architect within thirty days after completion and acceptance of same by said architect.

5. Each proposal shall be signed by the full name of the bidder, and if a company or corporation, by the full name of the partners or officers.

6. The Board of County Commissioners of Rowan County, North Carolina, reserve the right to reject any or all proposals.

7. By order of the Board of County Commissioners of Rowan County, North Carolina.

(Signed) P. B. BEARD,
Chairman Board of Commissioners
Rowan County, N. C.

Attest:
E. H. MILLER,
Clerk Board of Commissioners
Rowan County, N. C.

Jail Cells, Etc.**NOTICE.**

The State of Texas,
County of Pecos, }

Fort Stockton, Texas, June 20, 1912.

Notice is hereby given that sealed proposals will be received from contractors by the County Commissioners' Court of Pecos County, Texas, at Fort Stockton, Texas, on July 15, 1912 all bids to be on file with the County Clerk at 9 o'clock A. M. on said date, for furnishing the County Jail at Fort Stockton, Texas, with cells and all necessary steel material, in accordance with plans and specifications now on file in County Clerk's office, Pecos county, Texas.

Bids will not be considered unless they are accompanied by a certified check or draft in the sum of \$500, made payable to John M. Odum, County Judge, and will be held by the Commissioners' Court until contract and bond are entered into.

The successful bidder will be required to give bond with some incorporated surety company authorized to do business in the State of Texas, and for the amount of the contract.

Plans and specifications can be seen at the office of the County Clerk of Pecos county, Texas, or at the office of the Architect, the Falls City Construction Company, at Louisville, Ky. A copy of said plans and specifications may be obtained by addressing the said Falls City Construction Company and paying for same.

The successful bidder will be paid for this work in county scrip or 6 per cent. interest-bearing warrants falling due in installments annually until the entire debt is fully paid, and as may be provided for by contract.

The right to reject any and all bids is reserved.

Advertised by order of the Honorable County Commissioners' Court of Pecos County, Texas.

Given under my hand and seal of office, at the office in Fort Stockton, Texas, on this the 20th day of June, A. D. 1912.

FRANK ROONEY,
Clerk of County Court, Pecos County, Texas.

Wanted—Bids on Barge Canal Work

60,000 cu. yds. excavation, all earth.
18,000 cu. yds. concrete.
Located 50 miles west of Rochester, on N. Y. Central R. R.
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GABRIEL BROS. CONSTRUCTION CO.,
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PIPE Business**

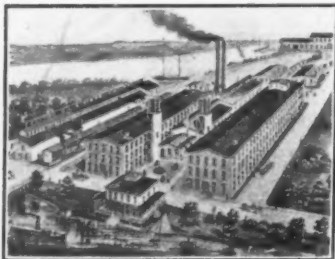
By virtue of unusual circumstances I have for sale one of the best equipped plants in the South. Capacity 8000 tons per year. Can be increased to 12,000 tons with comparatively small amount of money. An unusual opportunity for some large Jobber of Plumbing Supplies.

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COTTON OIL AND FIBRE PLANT FOR SALE



Eleven acres, located at Berkley (Norfolk, Va.).

Riparian rights, 300 feet front on Elizabeth River, arm of Chesapeake Bay.

Sidings connecting with all railroads. Artesian wells in addition to city water. Sewers.

Two and one-third acres of floor space. Electric drive throughout.

Automatic sprinklers, fire pump, tanks and cisterns, effecting low insurance rates.

600 H. P. Boiler capacity. Feed-water Heater and Pumps.

475 K. W. Dynamos and Engines.

100-ton Cottonseed Oil Mill, 6-press outfit.

200-barrel Oil Refinery.

50-ton Hull Plant, equipped with Foos Attrition Mills, Motors, Mixers, Cyclones and Lifters.

Two Gins. Revolving Presses, Separators, Conveyors and all equipment.

Feed Grinder and Mixer.

One three-story brick building, 46x200 feet, available for other lines of manufacture.

Price reasonable for a going concern.

Cuts and description on request. Address

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About two thousand acres of kaolin lands, located at Seivern, S. C., Aiken County, on the line of Southern Railway. This kaolin is a high grade and in many places about thirty feet strata and only about five or ten feet from the surface, and there is any quantity of purest spring water directly at the mines. The owners of this property expended about three hundred thousand dollars for a railroad of thirty miles, which runs directly into the property. This road is now owned and operated by the Southern Railway Co. For further information address

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Western and Southern Propositions

Of merit, requiring money for development, will receive prompt consideration.

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Will consider local representation from a few business concerns of established reputation.

115,000,000 Feet Pine Timber and Cypress in North Carolina

Together with a new and complete saw-mill, drykilns, planing mill, and complete tramroad with enough rail to log entire tract. Ample locomotives. Timber is well located, and 100,000,000 feet of additional timber is controlled by the situation to be bought as needed and controlled by tramroad and the mill. As principal owner resides a long ways from property, is in ill-health and wants to go to Europe, and no practical saw-mill man interested in this, has decided to sell at most attractive prices. Full particulars, write us.

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A complete ring spinning cotton plant. Must be sold. Address

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The Mercer Electric Railway Grade from the City of Princeton, W. Va., to the town of Athens, is for sale, and will be sold at a bargain. For terms apply to
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LOCATED IN THE SOUTH
7070 spindles, well balanced, complete equipment, modern machinery. Stone buildings, operatives' houses. Address

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A quantity of Cotton Oil Machinery—Presses, Pumps, Cooker, etc. For prices write to

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Completely equipped woolen mill, located in Waco, Texas, with ample ground, tenant-houses, etc. For full particulars address

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THE ASHTABULA WORSTED MILLS will be sold at Auction, July 15, 1912, at 1 P. M. For further information call or write to

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Including one New Era Grader, Wheel Scrapers, Drag Scrapers, Carts, Plows, Wagons, etc. Address **AUGUSTA NORTHERN RAILWAY, Saluda, S. C.**, where all can be seen.

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Hauling outfit consisting of 1 25 H. P. Port Huron combination Traction Engine in fine condition with 8 5-1/2 c. yd. Port Huron Self-spreading Car Wagons, used eight months. 2 10-ton Port Huron Steam Rollers. 2 Austin and Aurora Jaw Crushers, 9x16 opening, 20 foot elevator.

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**NO REASONABLE OFFER REFUSED
MUST BE REMOVED IN 30 DAYS**

10 locomotives, 60 dump cars, 3 and 4-yard capacity; 800 tons of 40-lb. rails, 100 tons of 60-lb. rails. Hoisting engines, vertical boilers, air compressor, concrete mixers, well drillers, miscellaneous lot of tools.

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MT. UNION, PA.**

Bargains in Machinery and Supplies.

500 H. P. CORLISS ENGINE

500 horse-power right-hand Engine, simple Corliss heavy-duty frame, size 24x48, complete, including flywheel 18 ft. diameter, grooved for 14 turns 1 1/2-in. rope, American, drive-steam receiver separator, 7-in. steam pipe, including one long radius bend and flanges; can be seen in operation at our mill in Mt. Carmel, Ill. Address

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CORLISS ENGINE

FOR SALE

24x48 Right-hand Filler & Stowell 1900 Heavy Duty Frame Corliss Engine, flywheel 18 ft. by 38 in. face, in first-class second-hand condition; now in use. Will be replaced with 50 per cent. larger engine within next thirty days. Can be inspected in action any time. Will make very close cash price for prompt acceptance.

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Little Quadruple Effect
150,000 gallon capacity, with condenser, suitable for sugar or soda solutions. A bargain. For further particulars, apply to

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NEW ORLEANS, LA.

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SPECIAL BARGAINS

Practically new, 200 K. W., 125 volt, 6-pole, Burke Dynamo, 480 R.P.M., \$825.00.

150 H.P., 250 volt, type "M.P.", 6-pole, C. & C., Shunt Wound Motor, 350 R.P.M., \$675.00.

100 K. W., 6-pole, 250 volt Crocker-Wheeler Dynamo, 650 R.P.M., \$640.00.

100 H.P., 2-phase, 60-cycle, Westinghouse, type "C," Induction Motor, 1120 R.P.M., \$450.00.

300 Dynamos and Motors in all sizes, thoroughly overhauled and guaranteed.

We buy, sell and rent.

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Generator D. C. to Gas Engine

1-35 K. W. Westinghouse 250 volt 6-pole direct current generator direct connected to 11x12 Westinghouse vertical 2-cylinder, 4-cycle gas engine. Speed 290 R. P. M. Outfit is furnished with switchboard and instruments. Practically new.

Plannmueller Engineering Co.

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100 K. W. 250 Volt Westinghouse Belted Generator

Six-pole, compound wound, direct current, type M, speed 650 R. P. M., with base pulley and field rheostat. Condition like new. Guaranteed. Price \$700.00 cash. Send for list of other Bargains.

MILLER-OWEN ELECTRIC CO.,
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15 H.P. 3-Phase 60-Cycle 220 Volt Westinghouse Motor

Slip-ring, type F, speed 900-450. Has ralls, pulley starter and controller for varying speed. Slightly used. Guaranteed. Price \$250.00 cash. Send for list of other Bargains.

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We recently purchased the wagon plant of the Hickman-Ebert Company and are prepared to sell the following at a sacrifice: 52 Channel Iron Ball-Bearing Lumber Yard Cars. 12 Transfer Cars. 1 Improved Fellow Sawing Machine with Saws. 1 Patent Automatic Double Vertical Chisel Hub Mortising Machine. 1 Spoke Tenoning Machine. 1 Hot Blast Heating Apparatus, complete for dry-kiln; cost \$2250. Each article of best manufacture; only slightly used; first-class condition. Address

THE UNIVERSAL STENOTYPE CO.,
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Rebuilt Engines and Boilers

Engines-Corliss.—18x42 Lane & Bodley, 18x36 Ohio Heavy Duty, 16x42 Allis, 12x30 Lane & Bodley.

Engines-Automatic.—14 1/2 x 24 Buckeye, 11x16 1/2 Buffalo Compound, 13 1/2 x 15 Taylor, 13 1/2 x 15 Atlas, 13 1/2 x 12 Harrisburg Ideal, 13x12 Phoenix, 12x14 Green, 12x12 Armstrong & Sims, 11x16 Atlas, 10x12 Valley, 8x14 Noyes.

Engines-Throttling.—18x24 Atlas, 14x18 Sinker-Davis, 14x14 Lewis Vertical, 12x16 Reed, 12x14 Brownell, 10x16 Bass, 10x12 Atlas, 9x14 Lane & Bodley, 8x10 Erie, 6x8 Industrial.

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Boilers-Fire Box.—100, 80, 60, 50, 40, 35, 30, 25, 20, 16, 12, 10 and 8 H. P., etc.

Boilers-Vertical.—50, 40, 35, 30, 25, 20, 16, 12, 10, 8 and 5 H. P., etc.

Heaters.—All sizes, Open and Closed.

Pumps.—All sizes, Single and Duplex.

Electrical.—30 K. W. Generator, direct connected to 8x10 Skinner Engine; 20 K. W. Generator, direct connected to 8x10 Economic Engine; 18 K. W. Belted Generator.

Miscellaneous.—Sawmills, Lath Mills, Edgers, Cut-off Saws, Re-Saws, Blowers, Exhaust Fans, Tanks, etc. Write for list. Also full assortment of new machinery.

Sole manufacturers of the celebrated "Leader" Injectors and Jet Pumps. Send for circular.

THE RANDLE MACHINERY CO.
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One 150 K. W. Engine, Generator Unit.
One 100 H. P. Engine.
One 45 H. P. Engine.

One 25 K. W. Lighting Generator.

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We have purchased the contents of several large machine and automobile plants, the equipment of which consists of all modern and standard make of tools, engine lathes from 10" to 48", boring mills from 22" to 60", planers from 18" to 48", turret lathes, 24" and 40" Gisholt, 2"x24" and 3"x36" Jones and Lamson, 24" Davis chucking lathe, 36" Fellows gear shapers, Cincinnati and Garvin plain and universal millers, Becker Brainard vertical millers, No. 2 Beaman and Smith combination miller, Brown and Sharpe universal grinders. For further information and prices apply to the

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Large Stock of Engines and Generators Locomotives and Cars

The Dorner Railway Equipment Co.
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Bargains in Rebuilt, Boilers, Engines, Locomotives, Etc.

1 25 H. P. Rebuilt Fire Box Boiler, price \$300.

1 each 40, 60 and 80 H. P. Rebuilt Fire Box Boilers, with fittings, at a bargain.

1 each 60, 80 and 100 H. P. Horizontal Tubular Boilers.

1 each 6, 8 and 10 H. P. Vertical Boilers, complete.

2 16 H. P. Hoisting Engines, double drums, with boilers.

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1 50 H. P. Gas Engine (used four months).

1 10" dia. Mine Ventilating Fan, with engine.

1 10-ton "Baldwin" Saddle Tank Locomotive, 44" gauge.

1 30-ton "Climax" Geared Logging Locomotive, 3" gauge.

1 each 6, 8 and 10" Electric Mine Ventilating Fans (Thayer Pat.).

The above must be sold without reference to cost. Write us.

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The best and the cheapest.
Let me know what you have for sale and what you want to buy.

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Cast Iron Pulleys all sizes.
Dry Kiln Trucks, sprocket chain.
One Shingle Mill, engines and boilers.
One Large Log Haul-up. Shafting.

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1 complete 600-light Plant, \$250.
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Large stock of Engines, Pumps, Air Compressors, all in A-1 condition.
35 H. P. Boilers at \$175.
Railroad Rails, 16-lb. to 70-lb.
Pipe from 1" to 12".

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1 50 H. P. Crocker-Wheeler Motor, D. C., 220 V., 600 R. P. M.
2 35 H. P. Commercial Motors, D. C., 250 V., 540 R. P. M.
1 25 H. P. Commercial Motor, 220 V., 700 R. P. M.
1 5 H. P. Commercial Motor, 250 V., 550 R. P. M.
1 15 H. P. Lundell Motor, D. C., 220 V., 920 R. P. M.
2 Lambert 40 H. P. Electric Hoists, D. D. and swinger, D. C., 220 volts.
4 60 H. P. Lambert Electric Hoists, D. C. and swinger, D. C., 220 volts.
2 1000 H. P. Berryman Heaters.
1 500 H. P. Berryman Heater.
3 350 H. P. B. & W. Water-Tube Boilers, 160 lbs.
Large stock of Fire Hose, 1-inch and 3-inch dia., complete, with couplings and nozzles.

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Immediate Delivery, Rebuilt and Guaranteed

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One (1) 38" raised to 42"x24" New Haven, practically new.
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Three (3) 25"x12" Davis H. S.
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Two (2) 22"x7" Pratt & Whitney T. A.
Two (2) 20"x11" Wright.
One (1) 20"x11" 6" New Haven.
One (1) 18"x8" Hendey T. A.
One (1) 16"x6" Harrington.

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Two (2) 28" Juengst.
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Two (2) 15" Smith & Mills.
One (1) 14" Adams Bolt Cutter.
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One (1) 36" Bickford Radial Drill.
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One (1) 150-ton Sellers Wheel Press.
Three (3) Bement Keyseaters.
One (1) 48" Bement Car Wheel Boring Mill with Crane.
One (1) 14" Mits & Merrill Keyseater.
One (1) 14" Newark Slotter.
One (1) 40"x8" Newark Blinse Horiz. Boring Mill.
Six (6) Sellers and Niles Axle Lathes.
One (1) No. 3 Long & Alstatter Punch and Shear.
Two (2) 20" Higley Cut-off Saws.
Chaser Grinder.
Two (2) 500-lbs. Merrill Board Drop Hammers.

One (1) 500-lbs. Bement Steam Hammer.
Large number of Spring Benders, Spring Eye Machines and Bending Machines.
43" Boiler Rolls, hand driven.
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One (1) 25" gap Allen Pneumatic Riveter.
Grinders, Saws, Emery Wheels, Anvils, Flat-terers, etc., etc.
BOILERS, ENGINES, AND GENERAL MACHINERY. Note my adv. in last week's issue. Send for special list. Correspondence solicited.

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Two Corliss Cross Compound Engines, 20"x42". One 3-drum 25 H. P. Electric Hoist, 500 volts, D. C. All practically new. Will sell cheap to quick buyer.

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RAILROAD YARD: CANTON, BALTIMORE, MD.

Rope Transmission, Tension Carriage and Rope

FOR SALE

One never used 100 to 125 H. P. Rope Transmission, complete with tension carriage and rope. Make us an offer.
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Machinery Opportunity

Replaced by electricity the following machinery in good order and rebuilt:
One 60 H. P. Boiler, \$350 on cars.
One 60 H. P. Boiler, \$300 on cars.
One 18x24 Starnes Steam Engine, \$950 on cars.

This machinery good as new for less than half price. A clean pick-up for somebody.
We have also some Hoisting Engines, Cables and Derrick Irons.

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INDUSTRIAL PLANTS

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Scrap Iron and Steel
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AT YOUR PRICE BEFORE REMOVAL

1 16x16x18 Class "A" Ingersoll Compressor.
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5 250 to 400 H. P. Corliss Engines.
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2 No. 15 Champion Crushers.
2 20-ton Standard Gauge Locomotives.

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100 H. P. Scotch Marine Boiler, 18 months old, 125 lbs., Hartford insurance, butt-strapped, triple riveted, \$500.00 f. o. b. Sunbury, Ohio.

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ENGINE AND DYNAMOS FOR SALE

All in fine shape.
One L. H. Hamilton Corliss, G. F.
One Triumph Dynamo, 100 K. W.
One Triumph Dynamo, 80 K. W.
MINNESOTA ENG. & MACH. CO.,
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Slack Barrel Heading Mill

FOR SALE OR TRADE.

We have at Obion a complete Slack Barrel Heading Mill, consisting of a Hill Steam Drag Saw, one Greenwood Bolting Saw, Gerlach Heading Sawing Machine, Automatic Saw Grinder, one 50 and one 40 H. P. H. S. & G. Engine, two 60 H. P. Boilers, Drykilm holding 200,000 pieces of stock, has 10,000 ft. of one-inch pipe, two Planers, two jointers, one Rounder, complete Filing Room Outfit, and many other appurtenances not mentioned. Have plenty of timber to go with this mill and prices are good. Would sell or lease for cash or credit, or buy the products. Address

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All sizes, any quantity, furnished with new threads and couplings, guaranteed for service.

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CONTRACTORS' EQUIPMENT OF EVERY DESCRIPTION

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WROUGHT PIPE (Black)

(Plain Ends)

FOB Cars High Falls, N. Y.

8000 feet 8" diameter @ 36c. per lineal foot
8000 feet 10" " @ 51c. " " "
10000 feet 12" " @ 67c. " " "

Purchased new 1908-9. Has been used for air line only.
Dresser joints @ 60% of cost.

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4,000 feet 1" Line Pipe, 1.67 lbs. per foot. 2,000 feet 4" Line Pipe, 10.00 lbs. per foot.
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12,000 feet 2" Line Pipe, 3.61 lbs. per foot. 1,150 feet 8¼" Casing, 24.00 lbs. per foot.
5,900 feet 3" Line Pipe, 7.50 lbs. per foot. 3,700 feet 8" Line Pipe, 24.00 lbs. per foot.

We desire to move our stock of pipe immediately and will quote very low prices for quick sales. Write or wire us.

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SECOND-HAND MACHINERY

LATHES.

13x5 Seneca Falls, comp. rest, pan.
14x6 Putnam, C. R., P. C. F.
14x6 Reed, R. & F.
15x6 Putnam, chuck and taper.
16x6 Robbins, compound rest.
16x6 Reed, C. R., P. C. F. taper.
16x8 Porter, compound rest.
18x6 Lodge & Davis, C. R., P. C. F.
18x8 American, taper chuck.
18x8 Putnam, K. & F. rest.
20x8 McMahon, C. R. chuck.
20x9 Pratt & Whitney, compound rest.
20x10 Prentiss, C. R., P. C. F.
20x10 Draper, C. R., P. C. F.
24x14 Reed, high speed.
26x12 Pond, C. R. and chuck.
26x22 New Haven, plain turning.
27x12 Pratt & Whitney, C. R., P. C. F.
30x12 Niles, C. R., P. C. F.
32x12 Johnson, triple geared, C. R.
32x17 Bement-Miles, C. R., triple geared.
36x14 and 16 Lodge & Shipley, C. R., P. C. F.
36x16 Reed, C. R., P. C. F.
38x14 Pond, P. R., P. C. F.
38x20 Fay & Scott, C. R., P. C. F.
40x18 Newark, triple geared, C. R., P. C. F.
46x38 Fitchburg, compound rest, P. C. F.
48x20 Putnam, C. R., T. G.
102x36 Bement, compound rest, P. C. F.
An assortment of speed lathes.

SCREW MACHINES.

20x8 Bogart, turret on carriage.
2½" Pearson, F. B. G., P. F.
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24" American, heavy turret.
2x24 Jones & Lamson, flat turret.
20x6 Bardons & Oliver, F. B. G.
No. 2 ½" Warner & Swasey, wire feed.
No. 2½" Garvin, wire feed, friction head.
No. 1 Garvin, wire feed.
¾" National Acme, automatic.
¾" Pratt & Whitney, screw shaver.
No. 3 Wanner & Swasey, hollow hexagon.
18x6 Springfield, univ. box.
No. 6 Brown & Sharpe, friction head.
1" Smurr & Kamen, wire feed.
¾", ½", 1" and 2½" Pratt & Whitney, automatics.
¾" 1-spindle Gridley, automatic.
1½"x15" Pratt & Whitney.

MILLERS.

No. 4½ Becker, small plain.
No. 3 Le Blonde, plain, back gears.
No. 2 Pratt & Whitney, Lincoln pattern.
No. 3 Cincinnati, plain.
No. 12 Brown & Sharpe, manufacturers'.
No. 15 Brainerd, small universal.
Beaman & Smith, pattern type for automobile work.

DRILLS.

28" Lodge & Davis, B. G. & P. F.
28" Barnes, B. G. & P. F.

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SINGER BUILDING, 149 BROADWAY, NEW YORK

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Second-Hand

All sizes, ½ inch to 24 inches

Furnished with new threads and couplings, suitable for all practical purposes; large stock constantly on hand, together with a general assortment of used contractors' machinery.

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IN revising our manufacturing equipment we find the following first-class

Used Machine Tools

which we offer at attractive prices

ENGINE LATHES

16 in. x 6 ft. Lodge & Shipley, Q. C. G.
16 in. x 6 ft. Hendey, Q. C. G.
16 in. x 6 ft. Pratt & Whitney, Q. C. G.
16 in. x 8 ft. Reed.
18 in. x 8 ft. Lodge & Shipley, Q. C. G.
18 in. x 10 ft. Lodge & Shipley, Q. C. G.
20 in. x 8 ft. Lodge & Shipley, Q. C. G.
20 in. x 10 ft. Lodge & Shipley, Q. C. G.
24 in. x 8 ft. Lodge & Shipley, Q. C. G.
36 in. x 12 ft. Lodge & Shipley, Q. C. G.

SPECIAL LATHES

24 in. x 7 ft. Lodge & Shipley Chucking Lathe.
No. 3 Lodge & Shipley Rapid Reduction Lathe.

METAL SAWS

No. 3 Nutter-Barnes Cold Saw.
Franklin Cold Saw, 3½ in. capacity.
Globe Power Hack Saw, 8 in. capacity.

MISCELLANEOUS MACHINES

Mumford 12 in. x 40 in. Molding Machine.
Write for complete description with prices of machines in which you are interested.

THE LODGE & SHIPLEY MACHINE TOOL CO.

CINCINNATI, OHIO

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One 26"x14" Lathe. One 20"x10" Lathe.
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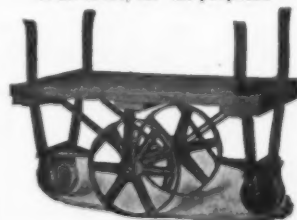
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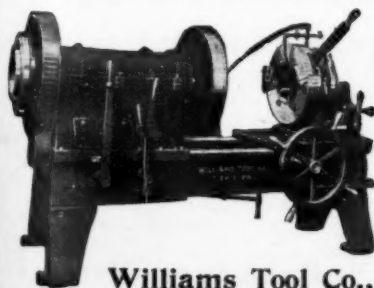
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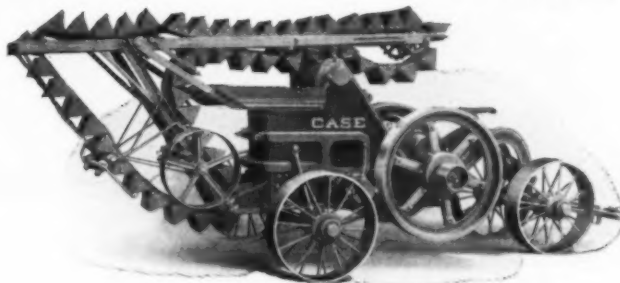


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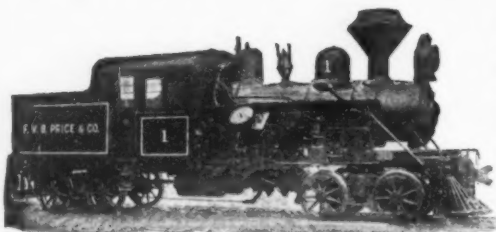
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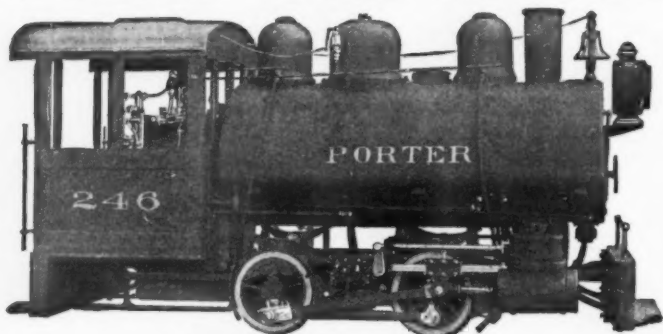
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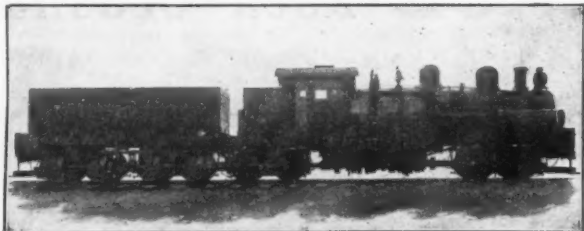
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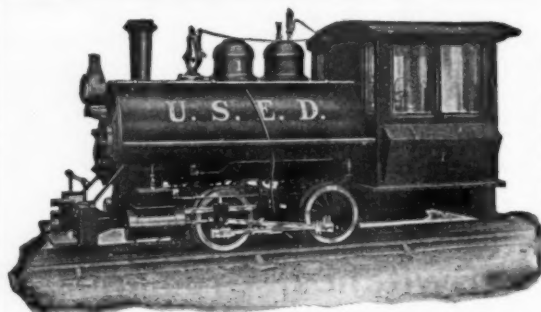
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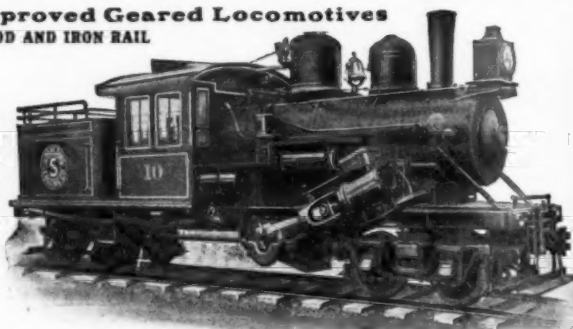
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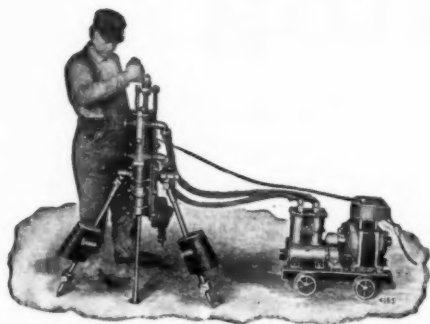
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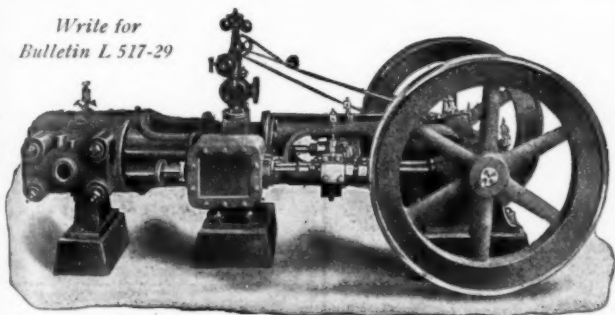
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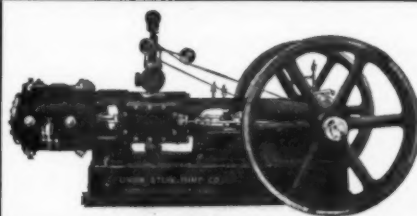
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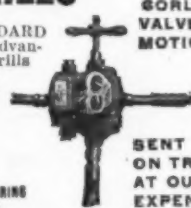
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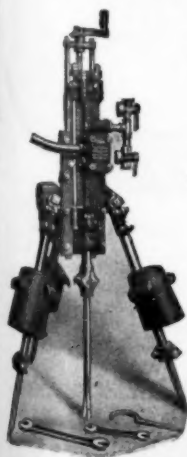
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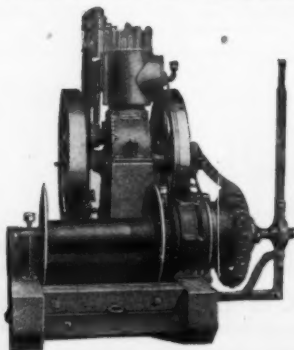
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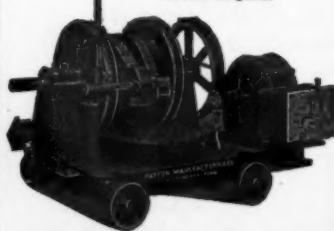
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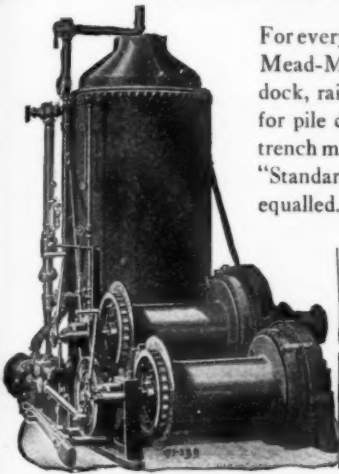
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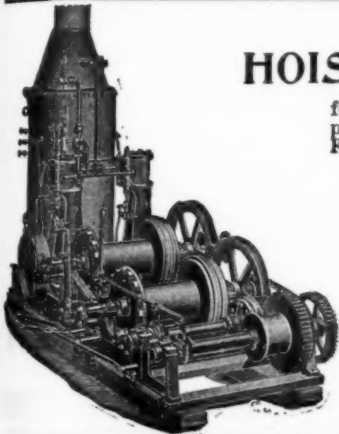
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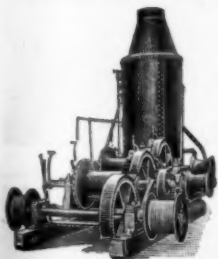
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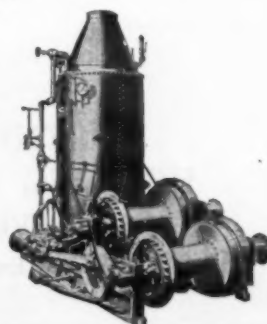
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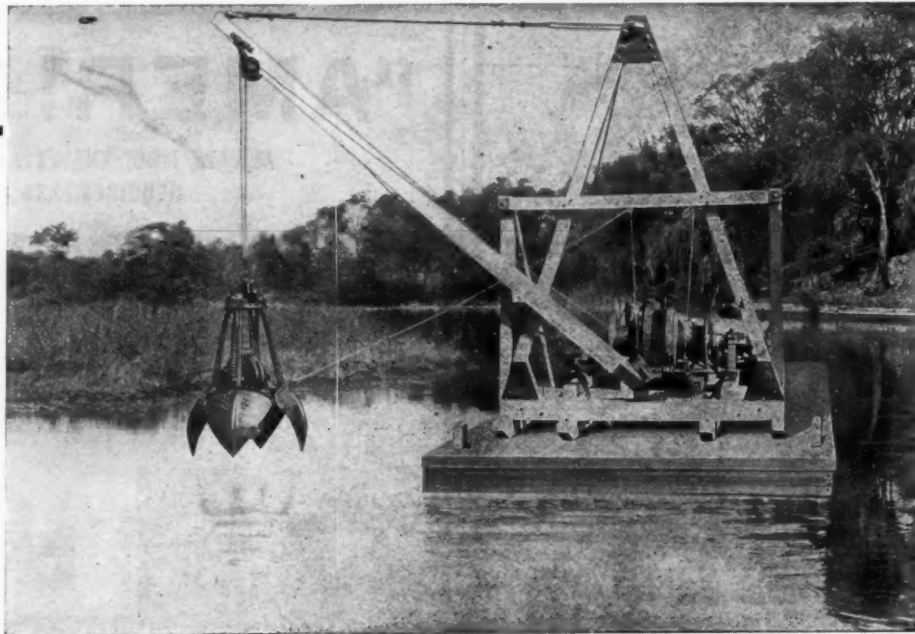
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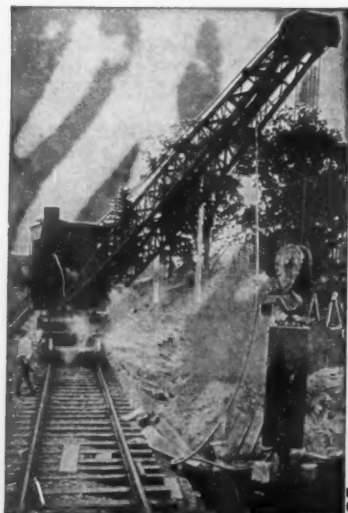
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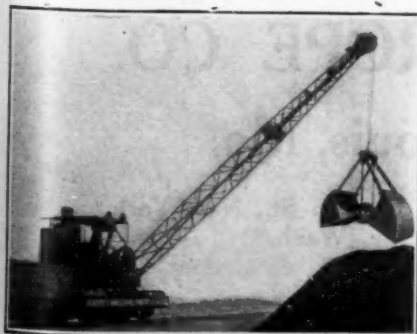
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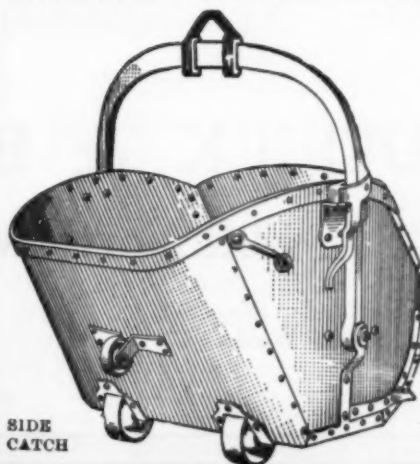
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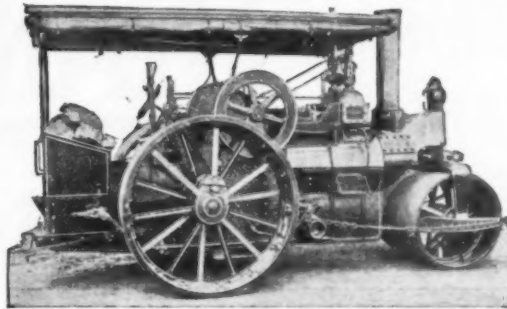
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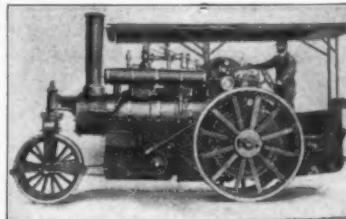
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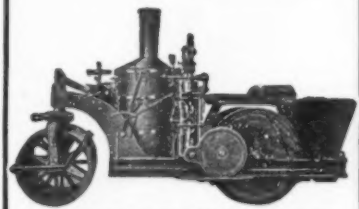
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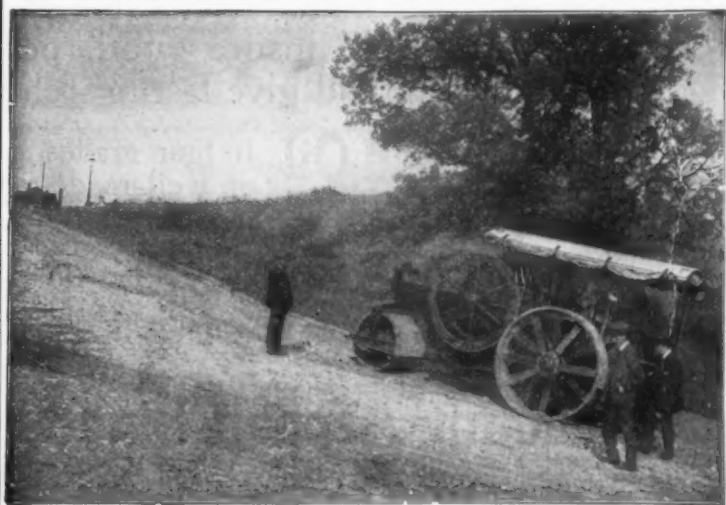
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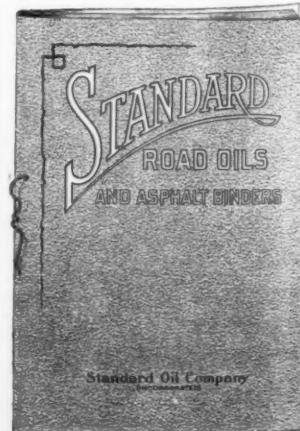
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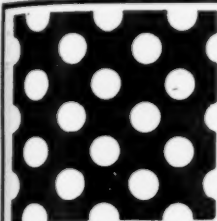
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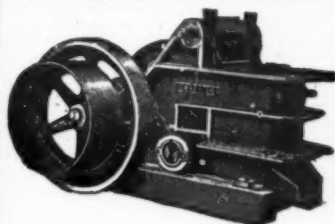
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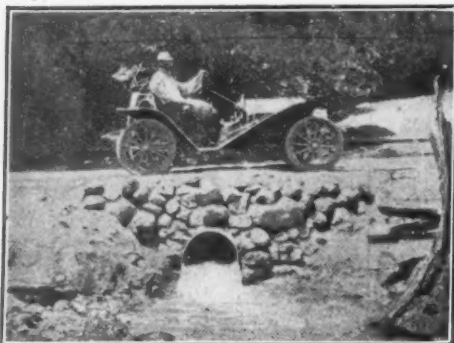
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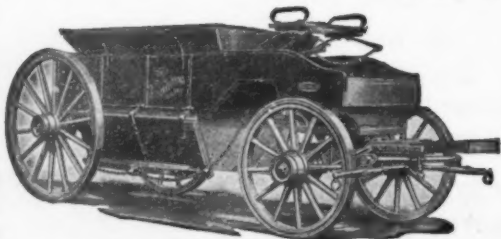
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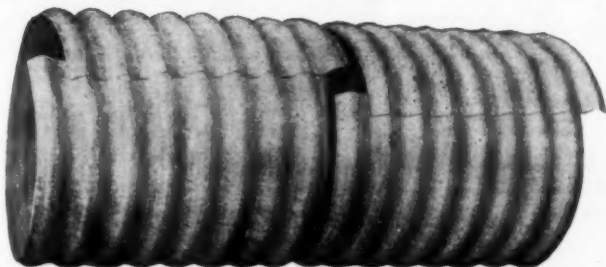
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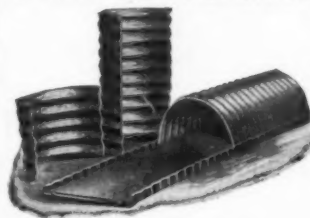
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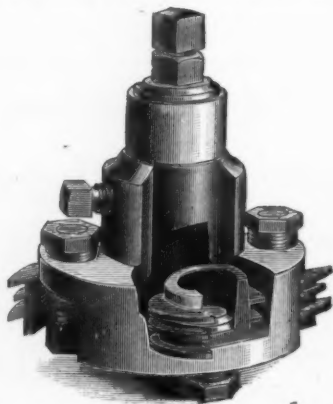


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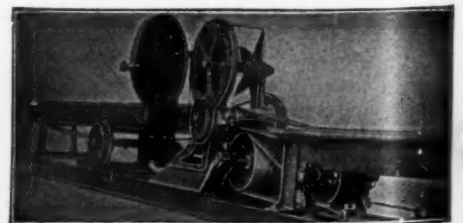
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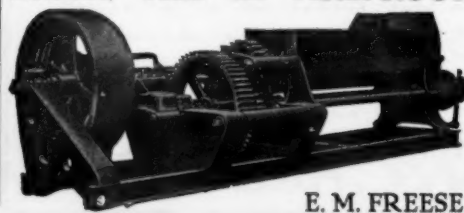
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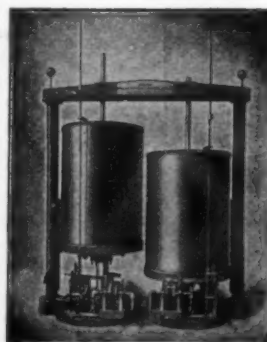
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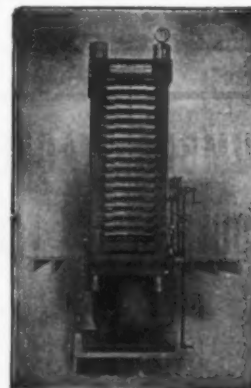
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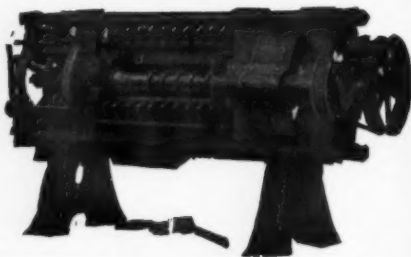
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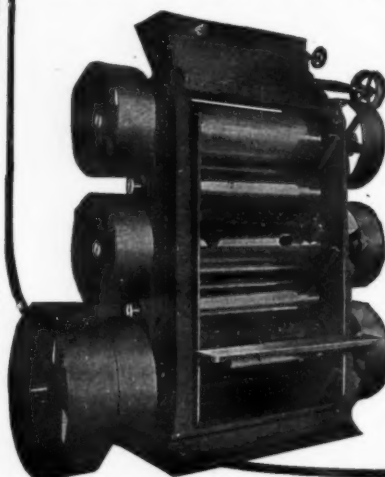
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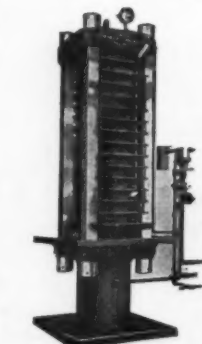
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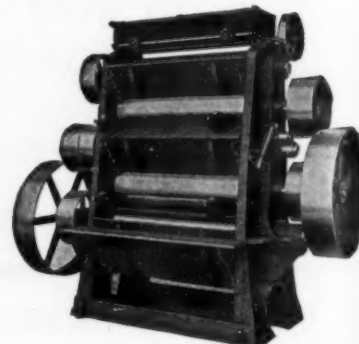
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135 Park Row, CHICAGO, ILL.

DON'TS FOR BUYERS

Don't fail to buy from advertisers in the MANUFACTURERS RECORD as they are the most representative firms seeking Southern business.

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Cities, Towns and Railroads Inviting Factories.

Continued From Page 107.

Locate Your Factory in Atlanta

If you are considering establishing a manufacturing plant anywhere in the South, we can offer you one of the most attractive propositions to be found. We have control of several thousand feet frontage on Belt Railroad, which connects the main lines of the greatest shipping center of the South.

For Full Information, Address

Shelby Smith, 401-2 Empire Bldg., Atlanta, Ga.

WYTHEVILLE'S INDUSTRIAL ADVANTAGES

Raw Materials

Cheap Power

Good Labor

Surrounded by a country rich in mineral, timber and agricultural resources; with 30,000 H. P. available from hydro-electric development of Appalachian Power Company; abundance of good labor; high elevation, (2360 feet); pure mountain water; low tax rate; directly on main line of Norfolk and Western Railway, giving access to good markets in every direction and to seacoast for export.

Wytheville Offers Unusual Openings for Industries

For further information address

G. S. Sexton, Mayor

Wytheville, Va.

MANUFACTORIES INVITED

Cheap Electric Power and Labor

Bedford City, Va., offers every advantage to industrial plants generally. Has cheap electric power which is very necessary to profitable manufacturing; has good supply of labor and ample raw material of various kinds within easy reach; and is on railroad connecting with all parts of the country and seaports. Good schools, churches, healthful climate and other facilities and comforts which make it a fine place of residence.

Detailed information gladly given by the

BOARD OF TRADE

BEDFORD CITY, VIRGINIA

THE SOUTH'S "GARDEN SPOT" IS TRAVERSED BY THE ATLANTA, BIRMINGHAM & ATLANTIC RAILROAD

Lands are reasonable in price, very fertile and adaptable to the widest range of crops. Splendid climate and excellent church and school advantages. The territory is attracting general attention throughout the country.

Those desiring to locate will do well to communicate early. Inquiries are invited and literature treating fully with the population, soil conditions, etc., will be promptly mailed.

W. H. LEAHY

GENERAL PASSENGER AGENT

ATLANTA, GA.

Chesapeake Steamship Co.

"CHESAPEAKE LINE"

NEW STEAMERS "CITY OF BALTIMORE" AND "CITY OF NORFOLK"

Equipped with United Wireless. Private Bathrooms, hot and cold, salt and fresh water. Shower Baths in bedrooms. Running water in all staterooms.

Leave Baltimore for Norfolk and Old Point Comfort daily, including Sunday, at 6.30 P. M.; connecting with rail lines for all points beyond, and water lines for Richmond, Va., Matthews and Gloucester Landings, and New York.

Leave Norfolk 6.15 P. M., Old Point Comfort 7.15 P. M. daily, including Sunday, for Baltimore and all points beyond.

"York River Line"

Leave Baltimore, Md., 5 P. M. Tuesday, Thursday and Saturday for York River Landings, West Point, Richmond and points beyond.

Leave West Point 6 P. M. Monday, Wednesday and Friday for York River Landings, Baltimore and all points beyond.

Freight received and forwarded. Bills of lading issued to all points. Ships between Baltimore and Norfolk equipped with cold-storage for handling perishable freight.

N. CHAPMAN, A. G. P. A.
J. CHISM, G. P. A. Baltimore, Md.

Baltimore Steam Packet Co.

OLD BAY LINE,

FOR OLD POINT COMFORT, NORFOLK AND PORTSMOUTH, CONNECTING WITH ALL RAIL LINES SOUTH AND WEST.

THROUGH TICKETS TO ALL PORTS.

Freight received and forwarded every week day, and Bills of Lading issued to all points South and West and for Richmond, Norfolk, Portsmouth, Old Point Comfort and Matthews and Gloucester Landings. Splendid Steamers Florida, Virginia or Alabama—lines south of New York, equipped with United Wireless Telegraphy. Leave Company's Pier, Light St., foot of Barre St., daily, including Sunday, at 6.30 P. M.

Tickets to all points and staterooms reserved at Ticket Office, 107 E. Baltimore St.; S. A. Ry. Ticket Office, Baltimore and Calvert Sts.; Albaugh's, 2 E. Fayette St., and at 500 Light St.

P. BYRD THOMPSON,

Traffic Manager.

JAMES E. BYRD,

General Passenger Agent.

JOHN R. SHERWOOD,

President and General Manager.

The Location For Your New Plant Should Afford

Adequate Shipping Facilities

Unless the location of your plant is such as affords adequate shipping and transportation facilities—such as will enable you quickly and economically to assemble the raw material and distribute the finished product—it might as well be located on an island in the middle of the Sea, or in the center of the broad desert. Good shipping and transportation facilities enable you to expand and develop your market to a far greater extent and to more remote regions than is possible in the case of your competitor who is less happily situated in this respect. If you are thinking of changing your location, or if you are contemplating the erection of a branch plant, the question of good shipping facilities may well deserve your most serious consideration.

At Texas City, Texas

Texas City is located on the MAINLAND of Galveston Bay, directly opposite the Government jetties at Galveston. It is equipped with the most modern dock, warehouse and terminal system of any Southern port. Modern electrical time and labor-saving devices, including an electrical switching system, electrical overhead carrying bridges and electric floor conveyors, have been installed, thus reducing the handling cost very materially. Warehouses are all of modern steel and concrete construction, resulting in a wonderful saving to shippers as regards insurance charges.

TEXAS CITY terminal railway system furnishes direct freight connections with all of the great railways systems of the Southwest, which give free access to an abundance of native raw materials in varied kinds and quantities. On the ocean side, established steamship lines operate to New York and Gulf Coast ports; Tampico, Vera Cruz and Mexican Gulf Coast ports, and the Harrison Leyland and Elder-dempster lines afford communication with Havre, Bremen and Liverpool. Arrangements are also under way for creating steamship service between Texas City and the principal ports of France, Italy and the Oriental Countries.

For detailed information address

Texas City Transportation Co.

Texas City, Texas

Opportunities for Colonization In a Land of Resources

Upon the Cumberland Plateau, which has been made available by the construction through it of the main line of

THE TENNESSEE CENTRAL RAILROAD, where soil and climate combine to make it the most attractive and profitable section of the South, ideal conditions exist for Colonization. Land is cheap and can be purchased in large tracts upon most favorable terms.

RUTLEDGE SMITH, Industrial Agent

TENNESSEE CENTRAL RAILROAD

Cookeville, Tennessee

In Alabama, forty-seven miles
from Birmingham

Excellent Location For GLASS PLANT

for the manufacture of all grades of high-class glass. Splendid deposits of silica, thorough tests of which have been made by experts and pronounced A-1.

*Sites and material will be given free
to responsible parties*

For further information address

J. A. PRIDE

General Industrial Agent Seaboard Air Line Railway
NORFOLK, VIRGINIA

Establish YOUR Business at the Base of Supplies

In Montgomery, Chattanooga, Rome, Atlanta, Macon, Columbus, Birmingham and a number of other cities and towns along the Central of Georgia Railway are factory sites which are ideal from every standpoint.

Your Iron, Coal, Coke, Timber and other raw materials are procurable at the lowest cost and in any quantities you need, as you need them, from immense supplies under your hand on every side. Efficient labor is plentiful, and water power abundant and inexpensive.

The prosperous, loyal community round about supplies a home market of great possibilities. Excellent shipping facilities open the whole country for promotion of sales on a successful competitive basis.

The progress that this district has made along industrial, commercial and agricultural lines during the past few years is but an indication of the prosperity that will mark its future. In it is the rational location for your factory. Any information you desire will be sent gladly and promptly upon request.

Address J. M. MALLORY

Savannah, Georgia

INDUSTRIAL AGENT

**CENTRAL OF GEORGIA
RAILWAY**

The Southeast the Coming Manufacturing Center

All the raw materials necessary for the successful operation of factories requiring coal, iron, lumber, clays, etc., also hydro-electric power at lowest cost, are obtainable at numerous points along the lines of the

If you desire to establish yourself in the midst of rapidly growing markets, with a minimum of competition and where climatic conditions are ideal, the Southeast offers opportunities unparalleled by any other section of the country.

Favorable Location for Manufacturing Plant

A county seat town in northern Alabama having exceptionally fine railroad facilities desires to induce manufacturers of knit goods, hosiery or other like lines, utilizing female help, to locate in their city. Local capital would give aid to a favorable industry; adequate buildings are ready for immediate occupancy. Refer to file 34903-C for further particulars.

Opportunity for Sales- man with Capital

The manufacturers of a superior grade of crucible steel shovels desire to connect with a *live salesman* who can put some capital into the business. The business is already well established, but extra working capital is desired to increase the output. The goods are held in high esteem by dealers and users, and a complete statement of finances will be furnished to those interested. Refer to file 28165 for full particulars.

SOUTHERN RAILWAY
Mobile & Ohio R. R., Georgia Southern & Florida Railway
and Virginia & Southwestern Railway



AN UP-TO-DATE SOUTHERN COTTON MILL IN VIRGINIA

Full particulars regarding any of the above properties may be obtained by referring to the file numbers and writing

M. V. RICHARDS, Land and Industrial Agent
Southern Railway, Room 52 WASHINGTON, D. C.

Opening for Exper- ienced Furniture Manufacturer

A North Carolina town situated on the Southern Railway where necessary grades of lumber are obtainable at manufacturers' prices desires an experienced manager with some capital, to establish a plant for the manufacturing of chairs, tables, etc. Buildings adaptable for such an industry are ready for occupancy. Local financial support would be given. Further information by referring to file 39332.

Opening for Wholesale Feed and Grocery House

A prosperous northern Tennessee town, situated at the junction of two railroads, in a rich, thickly populated, out-lying farming section offers an exceptional opening for establishing a *wholesale feed and grocery house*. Full particulars by referring to file 40855.

A Natural Question

In a town not far from the South there are located a number of plants engaged in making barrels, boxes, crates, baskets and hampers for use in the transportation of fruits and vegetables from the fields to the markets.

It is pointed out as a feature in the town's favor as a manufacturing center that there is a never-failing market for the products of these plants, because they furnish the various articles they make to the farmers and fruit growers all the way from the truck fields of the Norfolk section to the orange groves of Florida.

The question naturally arises:

Why should not such things be made in Florida, where they are needed?

Florida has the timber—millions of acres of it—and wood-products of the kind used in the State should be manufactured in the State.

The thousands of new acres set each year to fruit and planted each year to truck create a constantly growing demand for the products of wood-working plants, and the opportunities for profit to be reaped from their establishment are many.

The timber is there, and can be procured at small cost. The market is right at hand, and the demand will increase with each recurring season for many years to come.

It is no untried experiment in Florida, for there are a few plants in various portions of the State that have made and are making good profits in the manufacture of just such things as are manufactured elsewhere. But these Florida plants cannot nearly supply the demand, and therefore the articles manufactured elsewhere are sent in to enjoy the profit that should be kept at home.

Along the line of the Florida East Coast Railway are numerous eligible openings for barrel factories and for mills that make boxes, crates, baskets and hampers—men and money are needed to develop these opportunities.

The Industrial Department of this railroad will cheerfully furnish information to those who seek it.

Florida East Coast Railway

J. E. INGRAHAM, Vice-President

ST. AUGUSTINE, FLA.

Hydro-Electric Power at Great Falls



Abundant Supply and Efficient Service To Meet Every Need of Manufacturers

ABUNDANCE of cheap power combined with efficient service are the compelling inducements offered manufacturers to establish their industries at Great Falls, S. C.

The vast expenditure for the construction and thorough equipment of the hydro-electric power plant at Great Falls by the Southern Power Company is in itself a striking testimonial of the peculiar advantages for manufacturing possessed by

SPECIFIC and definite opportunities await those interested in clay-working, wood-working, cotton manufacture and other varied industries, the raw materials for which are readily accessible.

Among these special attention is called to clays that are worthy of close investigation for making fire-proof tile, drain tile, fire brick and high-grade building brick. Large deposits of these clays are located immediately at

Great Falls, S. C.

The big Great Falls plant will furnish 29,000 H. P. rendering available sufficient power to meet the needs of many industries.

A most important feature too is the character of the service back of this power supply—a service complete and satisfactory in its scope resulting from years of experience supplying every need of thousands of power users by the Southern Power Company.

Then too Great Falls is advantageously located to draw upon the South's abundant resources of mine, forest and field.

Complete transportation facilities are available through the Seaboard Air Line system, one of the South's greatest trunk lines, which with its connections supplies every requirement of the manufacturer for ready distribution.

The Industrial Department of this railroad would be pleased to go into careful detail regarding the adaptability of Great Falls for your industry.

Seaboard Air Line Railway

J. A. PRIDE, General Industrial Agent

NORFOLK, VA.

West Virginia's Natural Gas

West Virginia is the largest producer of natural gas in the country. Its estimated total output for 1909 was 166,435,000,000 cubic feet, of which less than one-third was consumed in the State.

The cost for industrial purposes averaged 6.89 cents per thousand cubic feet, the price ranging from 4 to 10 cents according to location and other manufacturing conditions, making it the cheapest fuel that can be obtained.

Couple with this immense supply of fuel, the important mineral resources of West Virginia, and it can be readily seen that unusual opportunities are offered for the economical manufacture of varied products from the State's high grade limestone, clay, glass sand, iron ore, and other deposits.

The Cheapest Fuel in America

Combined with West Virginia's strategic location, right in the heart of our greatest activities; an abundant supply of raw materials, and the thorough distribution facilities furnished by the Baltimore & Ohio, offer the requirements for manufacture that are at once complete and unapproachable.

West Virginia's resources merit the earnest attention and investigation of the investor and manufacturer.

The Baltimore and Ohio through its Industrial Department always co-operates to the fullest extent not only with established enterprises along its line, but also with those contemplating the location of new industries, and detailed information will be gladly furnished.

Baltimore & Ohio Railroad

W. W. Wood, Industrial Agent

Baltimore, Md.

Splendid Openings for Woodworking Plants Along the Clinchfield Route

The Clinchfield penetrates a portion of the Appalachian South that is rich in virgin hardwoods.

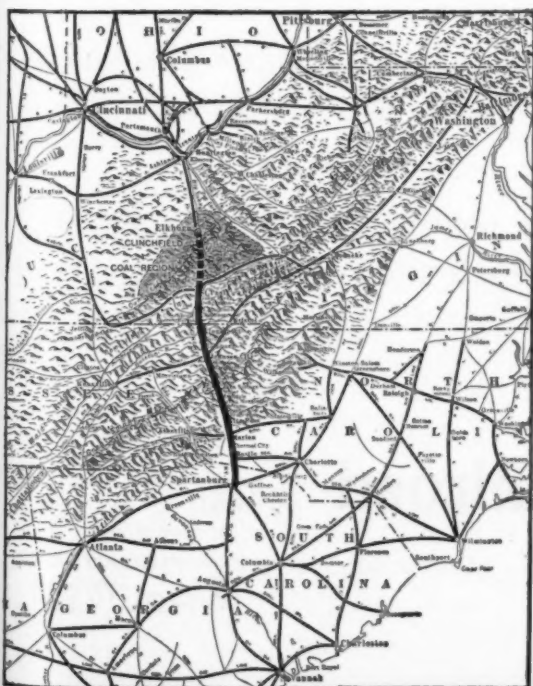
All along its line, extending for 240 miles through Southwest Virginia, Eastern Tennessee and Western North Carolina, there are extensive tracts of timber that have not been touched, and which contain some of the finest varieties of hardwoods that remain in the country.

Heretofore inaccessible, as no railroad penetrated this country before the Clinchfield was built, these valuable timber tracts are now available for the establishment of woodworking plants.

And every requirement for manufacture—labor, cheap power and excellent shipping facilities—is awaiting those who would take advantage of the splendid openings for factories to make products of many different kinds.

The trend of manufacture of articles from hardwoods must, from the economic desirability of getting close to the base of supply, be toward the Appalachian South, because, according to the U. S. Forestry Bureau, the bulk of hardwoods remaining in the country is in that section.

It would unquestionably be good business policy to carefully consider these facts.



Our expert timber cruisers have gathered valuable data covering the forests in our territory, and to those seriously interested this will be gladly furnished.

Carolina, Clinchfield & Ohio Rwy.

"THE ROAD OF OPPORTUNITY"

J. J. Campion,
V.-P. and Traffic Manager

R. F. Brewer,
Industrial Agent

Johnson City, Tenn.

Mineral Riches in Mississippi

The riches of the lands of Mississippi that lie along the lines of the Illinois Central Railroad are not all expressed in terms that show the productive power of the soil, though these alone tell of fortunes to be made by proper care and cultivation.

There is besides a mine of wealth under ground awaiting the touch of enterprise and money to bring it forth in amazing abundance.

There are in Mississippi deposits of clays especially adapted to the making of handsome building brick, durable paving blocks, drain tile and pottery.

There are deposits of sands that have been pronounced to be of great value in glass-making.

There are numerous strata of cement rock of a high degree of purity, and admirably adapted to the manufacture of Portland cement.

Brick and tile are being made in a few sections, but nowhere to the extent that the amount of raw material warrants or the constantly increasing building and development enterprises demand.

The cement rock and glass sands lie as nature deposited them—inutile, performing no part in the enrichment of mankind or the progress of the world.

The clays that would bring profitable returns to the maker of pottery and high-priced ceramics rest untouched by the hand of the artisan.

Meantime Mississippi spends increasing hundreds of thousands of dollars annually for the things of necessity and attractiveness that should be made from the resources she possesses, and her nearby neighbors annually send to far-away communities other hundreds of thousands, in ever-increasing volume, that would be spent in Mississippi were her possessions of raw materials properly utilized.

Mississippi needs new men, new money, new energy, to help in developing her latent resources, and to aid in working her deposits of raw materials into finished products.

*An Inquiry
Directed
To our
Industrial
Department
Will secure
Full Information.*

Illinois Central Railroad
Chicago, Ill.

*J. C. Clair,
Industrial
and
Immigration
Commissioner,
Chicago, Ill.*

Tidewater Virginia Has All the Elements Essential to Industrial Expansion

Manufacturers Should Investigate Before Selecting Sites Elsewhere

Tidewater Virginia already contains many flourishing industries, but there is ample room for several times the number. All the requisites of broad industrial development are here to an unusual degree.

This section possesses complete water and rail transportation facilities which extend into those nearby parts of the country that have unlimited supplies of mineral, timber, agricultural and other resources in great variety; and these shipping facilities are equally satisfactory for the distribution of finished products in the most profitable markets of this country as well as in other parts of the world.

Efficient labor can be had, and when it is necessary to bring it in from other sections it soon becomes contented, due to the healthful equitable climate, the abundance of wholesome food and the considerate treatment of the residents.

The largest coal fields of America are traversed by three big railway systems which have their tidewater termini in this section, and satisfactory steam power can be easily produced, or if electric power be wanted the Virginia Railway & Power Co., which supplies electric light and power throughout this section, offers service that is modern and complete in every way.

So no matter what the nature of the industry, this territory can abundantly furnish all the essentials of profitable manufacture; and manufacturers who are seeking sites for new plants or branch plants will be well paid for investigating conditions here.

The Virginia Railway & Power Co., which is thoroughly acquainted with the industrial and commercial resources and advantages of the territory it serves, and with full, warranted faith in the future of this vicinity, wants to help manufacturers and business men in selecting their sites, and will be very pleased to supply those interested with detailed information so that every phase of the matter can be intelligently studied.

Virginia Railway and Power Company

RICHMOND

NORFOLK

PETERSBURG

PORTSMOUTH

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VIRGINIA

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Gandy Belting Co., Baltimore, Md.
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- Belting. (Chain.)**
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Morse Chain Co., Ithaca, N. Y.
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Southern Engine & Boiler Works, Jackson, Tenn.
Union Iron Works Co., Selma, Ala.
Valk & Murdoch Iron Works, Charleston, S. C.
Vogt Machine Co., Henry, Louisville, Ky.
Walsh & Weldner Boiler Co., Chattanooga, Tenn.
- Boiler Tubes. [See Tubes, Boiler.]**
- Bolts, Nuts, Rivets, Studs and Washers.**
Garland Nut & Rivet Co., Pittsburgh, Pa.
Milton Mfg. Co., Milton, Pa.
Oliver Iron & Steel Co., Pittsburgh, Pa.
Republic Iron & Steel Co., Youngstown, O.
- Bonds. (Surety, etc.)**
Fidelity & Deposit Co., Baltimore, Md.
- Boring. (Cylinder.)**
Richmond Machine Wks., Inc., Richmond, Va.
Strickland Machine Co., Richmond, Va.
- Bottling Outfits.**
Vilter Mfg. Co., Milwaukee, Wis.
- Box Shooks.**
Naylor & Co., S. E., Gulfport, Miss.
- Brass Goods.**
Bailey-Lebby Co., Charleston, S. C.
Buckeye Iron & Brass Works, Dayton, O.
Kennedy Valve Mfg. Co., Elmira, N. Y.
Powell Co., Wm., Cincinnati, O.
Pratt & Cady Co., Hartford, Conn.
- Brazings. (Cast Iron.)**
Richmond Machine Works, Inc., Richmond, Va.
Strickland Machine Co., Richmond, Va.
- Brewers' Machinery.**
Vilter Mfg. Co., Milwaukee, Wis.
- Brick. (Building.)**
Am. Enamelled Brick & Tile Co., New York, N. Y.
Brookhaven Pressed Brick & Mfg. Co., Brookhaven, Miss.
Flake & Co., Inc., New York, N. Y.
Hood Brick Co., B. Mifflin, Atlanta, Ga.
Hydraulic Press Brick Co., St. Louis, Mo.
Kittanning Clay Products Co., Bradford, Pa.
Oconee Brick & Tile Co., Milledgeville, Ga.
Pittsburgh-Buffalo Co., Pittsburgh, Pa.
Sibley-Menge Brick & Coal Co., Birmingham, Ala.
Scott Brick Co., Alex. A., Knoxville, Tenn.
- Brick. (Blas Furnace, Coke Oven.)**
Hood Brick Co., B. Mifflin, Atlanta, Ga.
- Brick. (Enamelled.)**
Amer. Enam. Brick & Tile Co., New York, N. Y.
- Brick. (Fire Clay.)**
Brookhaven Pressed Brick & Mfg. Co., Brookhaven, Miss.
Flake & Co., Inc., New York, N. Y.
Killian Fire Brick Works, Killian, S. C.
Louisville Fire Brick Works, Highland Park, Ky.
Pomona Terra-Cotta Co., Pomona, N. O.
Stevens' Sons Co., H., Macon, Ga.
Taylor Sons Co., Chas., Cincinnati, O.
Union Mining Co., Mt. Savage, Md.
West Virginia Fire Clay Mfg. Co., Pittsburgh, Pa.
- Brick. (Paving.)**
Carlyle Paving Brick Co., Portsmouth, O.
Copeland-Ingalls Shale Brick Co., Birmingham, Ala.
West Virginia Fire Clay Mfg. Co., Pittsburgh, Pa.
- Brick and Clayworking Machinery and Supplies.**
Carnell, George, Philadelphia, Pa.
Fernholtz Brick Machinery Co., St. Louis, Mo.
Freese & Co., E. M., Gallon, O.
Scott-Madden Iron Works, Keokuk, Ia.
Steele & Sons, J. O., Statesville, N. C.
Taplin-Rice-Clerkin Co., Akron, O.
- Brick Fireplaces. [See Fireplaces, Artistic Brick.]**
- Brickwork. (Artistic.)**
Flake & Co., Inc., New York, N. Y.
- Bridges. (Concrete.)**
Roanoke Bridge Co., Inc., Roanoke, Va.
- Bridges. (Rolling Lift.)**
Scherzer Rolling Lift Bridge Co., Chicago, Ill.
- Bridges.**
American Bridge Co. of New York, New York.
Belmont Iron Works, Philadelphia, Pa.
Champion Bridge Co., Wilmington, Ohio.
Des Moines Bridge & Iron Co., Pittsburgh, Pa.
Farris Bridge Co., Pittsburgh, Pa.
Memphis Bridge Co., Memphis, Tenn.
Roanoke Bridge Co., Inc., Roanoke, Va.
Scherzer Rolling Lift Bridge Co., Chicago, Ill.
Vincennes Bridge Co., Vincennes, Ind.
Virginia Bridge & Iron Co., Roanoke, Va.
York Bridge Co., York, Pa.
- Bridge and Structural Iron Paints.**
Chattanooga Paint Co., Chattanooga, Tenn.
Dixon Crucible Co., Joseph, Jersey City, N. J.
- Brimstone.**
Union Sulphur Co., New York, N. Y.
- Buckets. (Excavators.)**
Allen American Manganese Steel Co., Edgar, Chicago, Ill.
Bieh Iron Works, Reading, Pa.
Hayward & Son Co., H. W., Chicago, Ill.
Moughan Mch. Co., Chicago, Ill.
Stuebner Iron Works, G. L., Long Island City, New York, N. Y.
Williams Co., The G. H., Cleveland, O.
- Buckets. (Ore, etc.)**
Bieh Iron Works, Reading, Pa.
Brown Hoisting Mch. Co., Cleveland, O.
Caldwell & Son Co., H. W., Chicago, Ill.
Hayward Co., New York, N. Y.
Link-Belt Co., Nicetown (Philadelphia), Pa.
Smith Co., T. L., Atlanta, Ga.
Williams Co., The G. H., Cleveland, O.
- Buhr Stones.**
Starr Co., B. F., Baltimore, Md.
- Builders and Contractors.**
Consolidated Engineering Co., Baltimore, Md.
Falls City Construction Co., Louisville, Ky.
Farris Bridge Co., Pittsburgh, Pa.
Ferro Concrete Construction Co., Cincinnati, O.
Seiden-Brock Construction Co., St. Louis, Mo.
White & Co., J. G., New York, N. Y.
- Buildings. (Financed and Erected.)**
Falls City Construction Co., Louisville, Ky.
Gulf Coast Construction Co., Houston, Tex.
- Building Supplies.**
Armstrong Mfg. Co., Richmond, Va.
Chicago House Wrecking Co., Chicago, Ill.
Norfolk Building Supplies Corp., Norfolk, Va.
Southern Building Material Co., Norfolk, Va.
Streeter Clip & Specialty Co., Inc., Chicago, Ill.
- Burners. (Oil.) [See Fuel Oil Equipment.]**
- Bushings. (Oilless, for Loose Pulleys.)**
Metaline Co., Long Island City, N. Y.
- Cables.**
American Steel & Wire Co., Chicago, Ill.
Broderick & Bascom Rope Co., St. Louis, Mo.
Roebing's Sons Co., John A., Trenton, N. J.
Williamsport Wire Rope Co., Williamsport, Pa.
- Cableways. (Overhead Suspension.)**
Broderick & Bascom Rope Co., St. Louis, Mo.
Flory Mfg. Co., S., Bangor, Pa.
International Cable Railway Co., Baltimore, Md.
Lidgerwood Mfg. Co., New York, N. Y.
Mead-Morrison Mfg. Co., Cambridge, Mass.
Roebing's Sons Co., John A., Trenton, N. J.
- Can and Box Making Machinery. (Tin.)**
Bliss Co., E. W., Brooklyn, N. Y.
- Cans.**
New Orleans Rfg. & Metal Wks., New Orleans, La.
Southern Can Co., Baltimore, Md.
- Canning Machinery and Supplies.**
Robins & Co., A. K., Baltimore, Md.
Sprague Canning Machinery Co., Chicago, Ill.
- Carborundum Paper and Cloth.**
Carborundum Co., Niagara Falls, N. Y.
- Card Clothing.**
American Supply Co., Providence, R. I.
- Cars. (Dump, Industrial, Logging and Misc.)**
Austin Mfg. Co., Chicago, Ill.
Baldwin Equipment & Supply Co., Chicago, Ill.
Chase Fdry. & Mfg. Co., Columbus, Ohio.
Georgia Car & Locomotive Co., Atlanta, Ga.
Hunt Co., C. W., West New Brighton, N. Y.
Males Co., Cincinnati, O.
Oliver Mfg. Co., Wm. J., Knoxville, Tenn.
Raleigh Iron Works Co., Raleigh, N. C.
Smith Co., T. L., Atlanta, Ga.
Steubner Iron Wks., G. L., Long Island City, N. Y.
Union Iron Works, Selma, Ala.
Western Wheeled Scraper Co., Aurora, Ill.
- Cars. (Passenger and Freight.) [See Railroad Equipment and Supplies.]**
- Car Couplers and Knuckles.**
Safety Car H't'g & L'ght'g Co., New York, N. Y.
- Car Lighting and Heating.**
Safety Car H't'g & L'ght'g Co., New York, N. Y.
- Car Wheels, Axles and Trucks.**
Carnegie Steel Co., Pittsburgh, Pa.
Oliver Mfg. Co., Wm. J., Knoxville, Tenn.
Union Iron Works, Selma, Ala.
- Castings. (Aluminum.)**
Aluminum Company of America, Pittsburgh, Pa.
King Mfg. Co., Birmingham, Ala.
- Castings. (Brass and Bronze.)**
Gilbert & Sons Brass Fdry. Co., A., St. Louis, Mo.
Keystone Bronze Co., Pittsburgh, Pa.
King Mfg. Co., Birmingham, Ala.
McKenna Bros. Brass Co., Pittsburgh, Pa.
Phosphor-Bronze Smelting Co., Phila., Pa.
Richmond Machine Works, Inc., Richmond, Va.
Stratton & Bragg Co., Petersburg, Va.
Triumph Electric Co., Cincinnati, O.
- Castings. (Iron, Gray, etc.)**
Caroline Foundry Co., Baltimore, Md.
Columbian Iron Works, Chattanooga, Tenn.
Georgia Car & Locomotive Co., Atlanta, Ga.
Glanorah Pipe & Foundry Co., Lynchburg, Va.
McWane Pipe Works, Lynchburg, Va.
Peole Engineering & Machine Co., Baltimore, Md.
Roanoke Iron Works, Inc., Roanoke, Va.
Robins Conveying Belt Co., New York, N. Y.
Stratton & Bragg Co., Petersburg, Va.
Tuscaloosa Iron Works, Tuscaloosa, Ala.
U. S. Cast Iron Pipe & Fdy. Co., New York, N. Y.
Vaik & Murdoch Iron Works, Charleston, S. C.
Westbrook Elevator Co., Danville, Va.
- Castings. (Malleable Iron and Steel.)**
Acme Steel & Malleable Iron Wks., Buffalo, N. Y.
Globe Malleable Iron & Steel Co., Syracuse, N. Y.
Missouri Malleable Iron Co., East St. Louis, Ill.
- Castings. (Steel.)**
Acme Steel & Malleable Iron Wks., Buffalo, N. Y.
Allen American Manganese Steel Co., Edgar, Chicago, Ill.
Crucible Steel Castings Co., Lansdowne, Pa.
Hoffman & Co., E. C., Baltimore, Md.
Reliance Steel Casting Co., Pittsburgh, Pa.
- Ceilings. (Metal.)**
Chattanooga Rfg. & Fdy. Co., Chattanooga, Tenn.
Edwards Manufacturing Co., Cincinnati, O.
Harry Steel Co., O. K., St. Louis, Mo.
Keighley Metal Cell. & Mfg. Co., S. Pittsburgh, Pa.
Milwaukee Corrugating Co., Milwaukee, Wis.
- Cement.**
Alpha Portland Cement Co., Easton, Pa.
Clinchfield Portland Cem. Corp., Kingsport, Tenn.
Dixie Portland Cement Co., Chattanooga, Tenn.
Hartman Cement Co., Inc., Wm. G., Philadelphia, Pa.
Ironton Portland Cement Co., Ironton, O.
Kirkpatrick Sand & Cem. Co., Birmingham, Ala.
Kosmos Portland Cement Co., Inc., Louisville, Ky.
Security Cement & Lime Co., Baltimore, Md.
Southern States Portland Cem. Co., Rockmart, Ga.
Standard Portland Cement Co., Leeds, Ala.
Tidewater Portland Cement Co., Baltimore, Md.
- Cement Machinery.**
Aising Engineering Co., J. R., New York, N. Y.
Power & Mining Machinery Co., Cudahy, Wis.
Raymond Bros. Impact Pulv. Co., Chicago, Ill.
- Chains. (Dredge, Quarry, Steam Shovel.)**
Standard Chain Co., Pittsburgh, Pa.
Weimer Chain & Iron Co., Lebanon, Pa.
- Channeled.**
Ingersoll-Rand Co., New York, N. Y.
- Checks, Metal. (Factory, Time and Mde.)**
American Railway Supply Co., New York, N. Y.
- Chemists.**
Agee, G. Worthen, Memphis, Tenn.
Barrows Laboratory Co., Memphis, Tenn.
Berkeley, W. N., Annapolis, Md.
Burn, Harry, Birmingham, Ala.
Davis, Geo. C., Philadelphia, Pa.
Froehling & Robertson, Richmond, Va.
Hunt & Co., Robt. W., Chicago, Ill.
Lawrence, James C., Memphis, Tenn.
McKenna, Dr. Chas. F., New York, N. Y.
Payne, Jas. H., Yorktown, Va.
Pritchard, Thos. W., Wilmington, N. C.
- Chimneys. (Steel-Concrete.)**
Specialty Eng. Co., Houston, Tex.
Weber Chimney Co., Chicago, Ill.
- Chloride Accumulator.**
Electric Storage Battery Co., The, Phila., Pa.
- Chucks.**
Morse Twist Drill & Mch. Co., New Bedford, Mass.
- Cities and Towns. (Commercial and Industrial Opportunities.) [See Industrial, Agricultural and Commercial Opportunities.]**
- Clayworking Machinery. [See Brick and Clayworking Machinery and Supplies.]**
- Cleansing Compound. (Floors, etc.)**
India Alkali Works, Boston, Mass.
- Clocks. (Time Recorders.)**
Kaiser, Louis E., Baltimore, Md.
- Clocks. (Watchman.)**
Kaiser, Louis E., Baltimore, Md.
- Coal.**
Alabama Con. Coal & Iron Co., Birmingham, Ala.
Cinchfield Coal Corp., Dante, Va.
Cinchfield Fuel Co., Spartanburg, S. C.
Consolidation Coal Co., Inc., New York, N. Y.
Pittsburgh-Buffalo Co., Pittsburgh, Pa.
Tennessee Coal, Iron & R. R. Co., B'gh'm, Ala.

- Coal Cutters.**
Ingersoll-Rand Co., New York, N. Y.
Jeffrey Mfg. Co., Columbus, O.
- Coal Handling Machinery.**
Bartlett & Snow Co., C. O., Cleveland, O.
Brown Hoisting Mch. Co., Cleveland, O.
Hayward Co., New York, N. Y.
Hunt Co., C. W., West New Brighton, N. Y.
Jeffrey Mfg. Co., Columbus, O.
Link-Belt Co., Nictown (Philadelphia), Pa.
Mead-Morrison Mfg. Co., Cambridge, Mass.
Robins Conveying Belt Co., New York, N. Y.
Williams Co., The G. H., Cleveland, O.
- Coal Tar and By-Products.**
Barrett Mfg. Co., Philadelphia, Pa.
- Coke.**
Alabama Coal & Iron Co., Birmingham, Ala.
Pittsburgh-Buffalo Co., Pittsburgh, Pa.
Tennessee Coal, Iron & R. R. Co., B'gh'm, Ala.
- Columns.** (Forch, Interior, Pergola.)
Nickerson Mfg. Co., Knoxville, Tenn.
- Columns and Lintels.** (Cast Iron.)
Tuscaloosa Iron Works, Tuscaloosa, Ala.
- Concrete Chutes.**
G. H. & B. Mfg. Co., Milwaukee, Wis.
- Concrete Construction.** (Reinforced.)
American Steel & Wire Co., Chicago, Ill.
Brown Hoisting Machinery Co., Cleveland, O.
Foster-Creighton-Gould Co., Nashville, Tenn.
Jeffrey Mfg. Co., Columbus, O.
Reichert Mfg. Co., Milwaukee, Wis.
Specialty Eng. Co., Houston, Tex.
- Concrete Curb Protection.** (Steel.)
Steel Protected Concrete Co., Philadelphia, Pa.
- Concrete Dams.**
Ambursen Hydraulic Const. Co., Boston, Mass.
Hydraulic Properties Co., New York, N. Y.
Multiple Arch Hydraulic Const. Co., Ltd., Spartanburg, S. C.
- Concrete Forms.** (Metal.)
Merillat Culvert Core Co., Winfield, Iowa.
Zelbert Mfg. Co., Milwaukee, Wis.
- Concrete Mixers.**
Arnold, F. T., New London, Conn.
Clough, John G., Quincy, Ill.
Jeffrey Mfg. Co., Columbus, O.
Marsh-Capron Mfg. Co., Chicago, Ill.
Smith Co., T. L., Atlanta, Ga.
Standard Scale & Supply Co., Pittsburgh, Pa.
- Concrete Pile.** (Corrugated.)
The Underground Const. Co., St. Louis, Mo.
- Concrete Reinforcing Bars.**
Carnegie Steel Co., Pittsburgh, Pa.
Concrete Steel Co., The New York, N. Y.
Franklin Steel Co., Franklin, Pa.
- Concrete Tiles.**
Universal Concrete Tile Co., New Orleans, La.
- Condensers.**
Allerger Pump & Condenser Co., New York, N. Y.
Dean Bros. Steam Pump Wks., Indianapolis, Ind.
Westinghouse Machine Co., Pittsburgh, Pa.
York Mfg. Co., York, Pa.
- Conductor Pipe.**
Edwards Mfg. Co., Cincinnati, O.
Hussey & Co., C. G., Pittsburgh, Pa.
Milwaukee Corrugating Co., Milwaukee, Wis.
- Contractors.** (Diamond Drill.)
Ameling Prospecting Co., H. R., St. Louis, Mo.
- Contractors.** (Hydro-Electric Developments.)
Ambursen Hydraulic Const. Co., Boston, Mass.
Hydraulic Properties Co., New York, N. Y.
Multiple Arch Hyd. Const. Co., Spartanburg, S. C.
- Contractors' Machinery and Supplies.** [See also Hoisting Machinery.]
American Engineering Co., Philadelphia, Pa.
American Hoist & Derrick Co., St. Paul, Minn.
American Locomotive Co., New York, N. Y.
Austin Mfg. Co., Chicago, Ill.
Belt Iron Works, Reading, Pa.
Case Threshing Mch. Co., Inc., J. I., Racine, Wis.
Clyde Iron Works, Duluth, Minn.
Contractors' Plant Mfg. Co., Buffalo, N. Y.
Exeter Machine Works, Pittston, Pa.
Floy Mfg. Co., S., Bangor, Pa.
Hyde Bros. & Co., Pittsburgh, Pa.
Ingersoll-Rand Co., New York, N. Y.
Males Co., Cincinnati, O.
Marine Metal & Supply Co., New York, N. Y.
Maryland Equipment & Supply Co., Baltimore, Md.
Mead-Morrison Mfg. Co., Cambridge, Mass.
Monaghan Mch. Co., Chicago, Ill.
Oliver Mfg. Co., Wm. J., Knoxville, Tenn.
Pickett Co., Inc., H. W., Philadelphia, Pa.
Pipe & Contractors' Supply Co., New York, N. Y.
Robins Conveying Belt Co., New York, N. Y.
Smith Co., T. L., Atlanta, Ga.
Steinboer Iron Works, G. L., Long Island City, N. Y.
- Conveying Machinery.**
Bartlett & Snow Co., C. O., Cleveland, O.
Brown Hoisting Mch. Co., Cleveland, O.
Caldwell & Son Co., H. W., Chicago, Ill.
Floy Mfg. Co., S., Bangor, Pa.
Hayward Co., New York, N. Y.
Hunt Co., C. W., West New Brighton, N. Y.
Jeffrey Mfg. Co., Columbus, O.
Lidgerwood Mfg. Co., New York, N. Y.
Link-Belt Co., Nictown (Philadelphia), Pa.
Mead-Morrison Mfg. Co., Cambridge, Mass.
McLanahan-Stone Mach. Co., Hollidaysburg, Pa.
Robins Conveying Belt Co., New York, N. Y.
Taplin-Rice-Clerkin Co., Akron, O.
- Cooling Towers.**
Allerger Pump & Condenser Co., New York, N. Y.
Baumell-Dawley Mfg. Co., St. Louis, Mo.
- Cordage.**
American Mfg. Co., New York, N. Y.
Broderick & Bascom Rope Co., St. Louis, Mo.
Columbian Rope Co., Auburn, N. Y.
International Cotton Mills Corp., New York, N. Y.
Plymouth Cordage Co., North Plymouth, Mass.
- Coupage Stock and Box Shook Machinery.**
Peter Gerlack Co., Cleveland, O.
- Core Drilling.** (Contractors.)
Ameling Prospecting Co., H. R., St. Louis, Mo.
- Cordage Machinery.**
Baskett-Dawley Machinery Co., Boston, Mass.
- Corn-Mill Machinery.**
Kordyke & Marmon Co., Indianapolis, Ind.
Raymond Bros. Impact Pulv. Co., Chicago, Ill.
Star Co., B. F., Baltimore, Md.
Wolf Co., Chambersburg, Pa.
- Cotton Duck.**
International Cotton Mills Corp., New York, N. Y.
- Cotton Oil and Products.**
American Cotton Oil Co., New York, N. Y.
- Cotton Yarns.** (Commission Merchants.)
Paulson, Linkroom & Co., New York, N. Y.
- Cotton-Gin Machinery.**
Carver Cotton Gin Co., East Bridgewater, Mass.
Continental Gin Co., Birmingham, Ala.
Gibbs Machinery Co., Columbia, S. C.
- Cotton-Mill Machinery.**
American Mach. & Mfg. Co., Charlotte, N. C.
American Supply Co., Providence, R. I.
Draper Co., Hopedale, Mass.
French Oil Mill Machinery Co., Piqua, Ohio.
Kilston Machine Shop, Lowell, Mass.
Lowell Machine Shop, Lowell, Mass.
Mason Machine Works, Taunton, Mass.
Saco-Petee Co., Newton Upper Falls, Mass.
Whitins Machine Works, Whitinsville, Mass.
Whitinsville Spin'g Ring Co., Whitinsville, Mass.
- Cotton-Mill Supplies.**
American Supply Co., Providence, R. I.
Whitinsville Spin'g Ring Co., Whitinsville, Mass.
- Cottonseed-Oil Machinery.**
Buckeye Iron & Brass Works, Dayton, O.
Burrows Engineering Co., Atlanta, Ga.
Callahan Co., W. P., Dayton, O.
Cardwell Machine Co., Richmond, Va.
Carver Cotton Gin Co., East Bridgewater, Mass.
Continental Gin Co., Birmingham, Ala.
French Oil Mill Machinery Co., Piqua, Ohio.
Murray Co., The, Atlanta, Ga.
Raymond Bros. Impact Pulv. Co., Chicago, Ill.
- Couplings.**
American Spiral Pipe Works, Chicago, Ill.
Brown Co., A. & F., New York, N. Y.
Caldwell & Son Co., H. W., Chicago, Ill.
Golden's Foundry & Machine Co., Columbus, Ga.
Pratt & Cady Co., Hartford, Conn.
Roversford Fdry & Mch. Co., Roversford, Pa.
Wood's Sons, T. B., Chambersburg, Pa.
- Couplings.** (Car.)
Weimer Chain & Iron Co., Lebanon, Pa.
- Couplings.** (Hose, Air, Gas, Steam and Water.)
National Tube Co., Pittsburgh, Pa.
- Coverings.** (Pipe, Boiler, etc.)
Johns-Manville Co., H. W., New York, N. Y.
Southern Pipe Covering Co., Inc., Richmond, Va.
- Covis.**
Pullman Auto. Ventilator Mfg. Co., York, Pa.
- Cranes.** (Locomotive.)
American Hoist & Derrick Co., St. Paul, Minn.
Brown Hoisting Machinery Co., Cleveland, O.
Exeter Machine Works, Pittston, Pa.
Ohio Locomotive Crane Co., Bucyrus, O.
- Cranes.** (Traveling, Hand, Power, Hydraulic.)
Brown Hoisting Machinery Co., Cleveland, O.
Hayward Co., New York, N. Y.
Lane Mfg. Co., Montpelier, Vt.
Northern Engineering Works, Detroit, Mich.
Speldel, J. G., Reading, Pa.
- Crayons.**
Georgia Talc Co., Asheville, N. C.
Lowell Crayon Co., Lowell, Mass.
- Crematories.** (Garbage.)
Specialty Eng. Co., Houston, Tex.
- Cresosoted Wood Block.** (Contractors for Laying.)
Cresosoted Wood Block Pav. Co., New Orleans, La.
- Cresosoting Works.**
American Cresosote Works, New Orleans, La.
Gulfport Cresosoting Co., Gulfport, Miss.
International Cresosot'g & Cons. Co., Galveston, Tex.
National Lumber & Cresos. Co., Texarkana, Ark.
Southern Cresosoting Co., Ltd., Slidell, La.
Southern Wood Preserving Co., Atlanta, Ga.
- Crossarms and Pins.**
Electrical Engineering & Cont'g Co., Raleigh, N. C.
Internat'l Cresosot'g & Cons. Co., Galveston, Tex.
Southern Cresosoting Co., Ltd., Slidell, La.
Western Electric Co., New York, N. Y.
- Cross Arms.** (Wood Cresosoted.)
American Cresosote Wks., New Orleans, La.
- Crossings.** [See Railroad Frogs and Switches.]
- Crosstie Machine.**
Standard Cross Tie Mch. Co., New Orleans, La.
- Crossties.** (Cresosoted.)
Internat'l Cresosot'g & Cons. Co., Galveston, Tex.
National Lumber & Cresos. Co., Texarkana, Ark.
Naylor & Co., S. E., Gulfport, Miss.
Southern Cresosoting Co., Ltd., Slidell, La.
- Crossties.** (Reinforced Concrete.)
Universal Concrete Tie Co., New Orleans, La.
- Crossties.** (Steel.)
Carnegie Steel Co., Pittsburgh, Pa.
- Crushers.** (Corn and Cob.)
Jeffrey Mfg. Co., Columbus, O.
Raymond Bros. Impact Pulv. Co., Chicago, Ill.
Williams Pat. Crusher & Pulv. Co., Chicago, Ill.
- Crushers.** (Rock.)
Austin Mfg. Co., Chicago, Ill.
Case Threshing Mch. Co., Inc., J. I., Racine, Wis.
Cresson Co., Geo. V., Philadelphia, Pa.
Power & Mining Machinery Co., Cudahy, Wis.
Raymond Bros. Impact Pulv. Co., Chicago, Ill.
Smith Co., T. L., Atlanta, Ga.
Universal Road Mch. Co., Kingston, N. Y.
Western Wheel Scraper Co., Aurora, Ill.
- Crushing and Pulverizing Machinery.**
Aising Engineering Co., J. R., New York, N. Y.
Austin Mfg. Co., Chicago, Ill.
Bartlett & Snow Co., C. O., Cleveland, O.
Cresson Co., Geo. V., Philadelphia, Pa.
Jeffrey Mfg. Co., Columbus, O.
McLanahan-Stone Mach. Co., Hollidaysburg, Pa.
Pratt Engineering & Mach. Co., Hollidaysburg, Pa.
Raymond Bros. Impact Pulv. Co., Chicago, Ill.
Taplin-Rice-Clerkin Co., Akron, O.
Walker & Elliott, Wilmington, Del.
Williams Pat. Crusher & Pulv. Co., Chicago, Ill.
Western Wheel Scraper Co., Aurora, Ill.
- Culverts.** (Corrugated Metal.)
American Culvert Mfg. Co., Buechel, Ky.
American Rolling Mill Co., Middletown, O.
Birmingham Metal Products Co., B'gh'm, Ala.
Canton Culvert Co., The, Canton, O.
Dixie Culvert & Metal Co., Atlanta, Ga.
Harry Bros. Co., Newport, Ky.
Harry Steel Co., O. K., St. Louis, Mo.
Kentucky Culvert Mfg. Co., Buechel, Ky.
New Orleans Hfg. & Metal Wks., New Orleans, La.
North Carolina Metal Culv. Co., Greensboro, N. C.
Roanoke Bridge Co., Roanoke, Va.
Tennessee Metal Culvert Co., Nashville, Tenn.
Virginia Metal & Culvert Co., Inc., Roanoke, Va.
- Culverts.** (Vitrified Pipe.)
Ribb Sewer Pipe Co., Macon, Ga.
Stevens Sons Co., H., Macon, Ga.
- Cupola Furnaces.**
Northern Engineering Works, Detroit, Mich.
Paxon Co., J. W., Philadelphia, Pa.
Petroleum Iron Works Co., Sharon, Pa.
- Custom House Brokers.**
Howard & Co., Savannah, Ga.
- Cuts.** (Half-tone, Line, etc.)
Baltimore Maryland Engr. Co., Baltimore, Md.
- Cutter Heads.** (Woodworking.)
Shimer & Sons, Samuel J., Milton, Pa.
- Cutter Grinders.**
Abrasive Material Co., Philadelphia, Pa.
Vitrified Wheel Co., Westfield, Mass.
- Dams.** (Multiple Arch Masonry.)
Multiple Arch Hydraulic Const. Co., Ltd., Spartanburg, S. C.
- Dams.** (Reinforced Concrete.)
Ambursen Hydraulic Const. Co., Boston, Mass.
Hydraulic Properties Co., New York, N. Y.
- Derricks and Derrick Fittings.**
American Hoist & Derrick Co., St. Paul, Minn.
Contractors' Plant Mfg. Co., Buffalo, N. Y.
Monaghan Machine Co., Chicago, Ill.
National Hoisting Engine Co., Harrison, N. J.
- Designers and Illustrators.** (Printed Matter.)
Baltimore Maryland Engr. Co., Baltimore, Md.
- Ditching Machinery.**
American Hoist & Derrick Co., St. Paul, Minn.
American Locomotive Co., New York, N. Y.
Fairbanks Steam Shovel Co., Marion, O.
Hayward Co., The, New York, N. Y.
Marion-Osgood Co., Marion, O.
Marion Steam Shovel Co., Marion, O.
Monaghan Machine Co., Chicago, Ill.
Williams Co., The G. H., Cleveland, O.
- Doors.** (Birch Veneered.)
Massee & Felton Lumber Co., Macon, Ga.
- Doors.** (Steel Rolling.)
Kinnear Mfg. Co., Columbus, O.
- Doors.** (Tin Clad.)
Victor Mfg. Co., Newburyport, Mass.
- Doors, Partitions.** (Metallic.)
Dahlstrom Metallic Door Co., Jamestown, N. Y.
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Massee & Felton Lumber Co., Macon, Ga.
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Standard Chain Co., Pittsburgh, Pa.
Weimer Chain & Iron Co., Lebanon, Pa.
- Dredge Cutters.**
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- Dredges.** [See Excavating Machinery.]
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Ingersoll-Rand Co., New York, N. Y.
Keystone Steam Well Mach. Co., Beaver Falls, Pa.
- Drills.** (Rock and Mining.)
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- Drop Forgings.**
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Globe Malleable Iron & Steel Co., Syracuse, N. Y.
- Drop Forging Machinery.**
Bliss Co., E. W., Brooklyn, N. Y.
- Drying Machinery.**
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Ruggles-Coles Engineering Co., New York, N. Y.
Sturtevant Co., B. F., Hyde Park, Mass.
- Drykilns.**
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- Dumbwaiters.** (Hand Power.)
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- Dynamite.**
du Pont de Nemours Powder Co., H. I., Wilmington, Del.
Keystone Nat'l Powder Co., Emporium, Pa.
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Terry Steam Turbine Co., New York, N. Y.
Western Electric Co., New York, N. Y.
Westinghouse Elec. & Mfg. Co., Pittsburgh, Pa.
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Westinghouse Elec. & Mfg. Co., Pittsburgh, Pa.
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Miller, Hyram Allen, Boston, Mass.
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Foster-Creighton-Gould Co., Nashville, Tenn.
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Byers Machine Co., John F., Ravenna, O.
Clyde Iron Works, Duluth, Minn.
Contractors' Plant Mfg. Co., Buffalo, N. Y.
Exeter Machine Works, Pittston, Pa.
Flory Mfg. Co., S. Bangor, Pa.
Hayward Co., New York, N. Y.
Link-Belt Co., Nicetown (Philadelphia), Pa.
Lidgerwood Mfg. Co., New York, N. Y.
Males Co., Cincinnati, O.
Mead-Morrison Mfg. Co., Cambridge, Mass.
Moulton Machine Co., Chicago, Ill.
Myrick Mch. Co., Olean, N. Y.
National Hoisting Engine Co., Harrison, N. J.
Novo Engine Co., Lansing, Mich.
Smith Co., T. L., Atlanta, Ga.
Stroudsburg Engine Works, Stroudsburg, Pa.

Hoists.

Spindel, J. G., Reading, Pa.

ELECTRIC.

American Hoist & Derrick Co., St. Paul, Minn.
C. H. & E. Mfg. Co., Milwaukee, Wis.
Lidgerwood Mfg. Co., New York, N. Y.
Moulton Machine Co., Chicago, Ill.
Northern Engineering Wks., Detroit, Mich.
Patten Mfg. Co., Chattanooga, Tenn.

GASOLINE.

Erle Clutch & Pulley Co., Erie, Pa.
Myrick Mch. Co., Olean, N. Y.
Patten Mfg. Co., Chattanooga, Tenn.

PNEUMATIC MOTORS.

Chicago Pneumatic Tool Co., Chicago, Ill.

Ingersoll-Rand Co., New York, N. Y.

Hoops, Bands, etc. (Galvanized.)

J. C. H. Galvanizing Co., Philadelphia, Pa.
McCalla, Harold, Philadelphia, Pa.

Hoops. (Barrel.)

American Steel & Wire Co., Chicago, Ill.

Carnegie Steel Co., Pittsburgh, Pa.

Hose.

Eureka Fire Hose Mfg. Co., New York, N. Y.
N. J. Car Spring & Rubber Co., Jersey City, N. J.

Hotels.

Emerson Hotel, Baltimore, Md.

Hotel Essex, Boston, Mass.

Hot Water Service Heaters.

Alberger Pump & Condenser Co., New York, N. Y.

Hydrants.

Bourdon Copper & Brass Wks. Co., Cincinnati, O.
Columbian Iron Works, Chattanooga, Tenn.
Glumorgan Pipe & Foundry Co., Lynchburg, Va.
Goulds Mfg. Co., Seneca Falls, N. Y.
Kennedy Valve Mfg. Co., Elmira, N. Y.
Myers & Bros., E. E., Ashland, O.
Pratt & Cady Co., Hartford, Conn.
Wood & Co., R. D., Philadelphia, Pa.

Hydraulic Giants.

American Spiral Pipe Works, Chicago, Ill.

Hydraulic Rams.

Goulds Mfg. Co., Seneca Falls, N. Y.
Rife Engine Co., New York, N. Y.

Kettles. (Drossing, Tinning, Smelting.)
Willing Iron Works Co., Millard F., Philadelphia, Pa.

Kettles. (Steam Jacket.)
Radger & Sons Co., E. B., Boston, Mass.
Petroleum Iron Works Co., Sharon, Pa.

Key Seater. (Portable.)
Harr & Son, John T., Brooklyn, N. Y.

Knitting Machinery.
Acme Knitting Mach. & Needle Co., Franklin, N. H.

Lamp Posts. (Electric, Gas.)
Western Gas Construction Co., Ft. Wayne, Ind.

Lamps. (Arc and Incandescent.)
Columbia Incandescent Lamp Wks., St. Louis, Mo.
Foster Electric Co., Schenectady, N. Y.

Lamps. (Arc and Incandescent.)
General Electric Co., Inc., Owensboro, Ky.
Lee Electric Co., Baltimore, Md.

Lamps. (Arc and Incandescent.)
Piedmont Electric Co., Asheville, N. C.
Western Electric Co., New York, N. Y.

Lamps. (Arc and Incandescent.)
Westinghouse Elec. & Mfg. Co., Pittsburgh, Pa.

Lands. (Mineral, Timber, Farm, etc.)
Barr, J. H. C., Philadelphia, Pa.

Laths. (Expanded Metal.)
Milwaukee Corrugating Co., Milwaukee, Wis.

Lathes. (Engine.)
Greaves, Kinsman & Co., Cincinnati, O.
Manning, Maxwell & Moore, Inc., New York, N. Y.

Lawn Furniture. (Wire.)
Bulles Iron & Wire Works, J. E., Detroit, Mich.
Duffer & Co., Baltimore, Md.

Lawn Furniture. (Wire.)
Duffer, Baggett & Co., Baltimore, Md.

Leadite.
Leadite Co., Inc., The, Philadelphia, Pa.

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Leadite Co., Inc., The, Philadelphia, Pa.

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Leadite Co., Inc., The, Philadelphia, Pa.

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Leadite Co., Inc., The, Philadelphia, Pa.

Leadite.
Leadite Co., Inc., The, Philadelphia, Pa.

Leadite.
Leadite Co., Inc., The, Philadelphia, Pa.

Southern Supply Co., Norfolk, Va.
Tampa Machinery Exchange, Tampa, Fla.
Texas Supply Co., Beaumont, Tex.
Toomey, Frank, Philadelphia, Pa.
Winterer Co., Herman L., Philadelphia, Pa.
Yeasley, Thomas, Philadelphia, Pa.

Machine Tools.
Greaves, Kinsman & Co., Cincinnati, O.
Manning, Maxwell & Moore, Inc., New York, N. Y.
Steptoe Shaper Co., John, Cincinnati, O.

Machinists. (Engineers.)
American Mach. & Mfg. Co., Charlotte, N. C.
Roanoke Iron Works, Inc., Roanoke, Va.
Stratton & Bragg Co., Petersburg, Va.
Universal Telegraphic Co., Baltimore, Md.

Magnesia Materials.
Johns-Manville Co., H. W., New York, N. Y.

Magnet Electro. (For Cottonseed, Linters and Hulls.)
Dixie Electro Magnet Co., Memphis, Tenn.

Magnetic Separators.
Parson Co., J. W., Philadelphia, Pa.

Mail Chutes.
Cutler Mail Chute Co., Rochester, N. Y.

Mantels. (Wooden.)
Northern Mantel Co., W. J., Memphis, Tenn.

Marble Work. (Interior.)
Dagostin & Angelini Bros., Montgomery, Ala.

Masonry Dams.
Multiple Arch Hydraulic Const. Co., Ltd., Spar-tanburg, S. C.

Mechanical Draft.
Buffalo Steam Pump Co., Buffalo, N. Y.
Richmond Engr. & Mfg. Co., Richmond, Va.
Sturtevant Co., B. F., Hyde Park, Mass.

Metal Ceilings. [See Ceilings, Metal.]

Metaline.
Metaline Co., Long Island City, N. Y.

Metal Cores. (For Concrete Culverts.)
Merillat Culvert Core Co., Winfield, Iowa.

Metal Culverts. [See Culverts.] (Corrugated Metal.)

Metal Shingles.
Burris & Co., John T., Anderson, S. C.
Chattanooga Rfg. & Dry Co., Chattanooga, Tenn.
Cincinnati Sheet Metal & Rfg. Co., Cincinnati, O.
Corbright Metal Roofing Co., Philadelphia, Pa.
Edwards Manufacturing Co., Cincinnati, O.
Hyndman Roofing Co., Cincinnati, O.

Metal Window Frames and Sashes.
Detroit Steel Products Co., Detroit, Mich.
Edwards Mfg. Co., The, Cincinnati, O.
Keighly Met. Cyl. Mfg. Co., S. Pittsburgh, Pa.
Voigtmann & Co., Chicago, Ill.

Metal Work. (Stamped and Embossed Metal Checks, Key Tags, etc.)
American Railway Supply Co., New York, N. Y.

Metal-Working Machinery.
Bertsch & Co., Cambridge City, Ind.
Biles Co., E. W., Brooklyn, N. Y.
Lefler & Co., Chas., Brooklyn, N. Y.
Long & Albattier Co., Hamilton, O.
Stoll Co., D. H., Buffalo, N. Y.

Micrometers, Calipers, etc.
Starrett Co., L. S., Athol, Mass.

Milk Filters. (Liquor, Milk, etc.)
International Filter Co., Chicago, Ill.

Mill Engineers and Architects.
Lockwood, Greene & Co., Boston, Mass.
Srinive, J. E., Greenville, S. C.

Mill Supplies.
Bailey-Lehby Co., Charleston, S. C.
Cameron & Barkley Co., Charleston, S. C.
Gainesville Iron Works, Gainesville, Ga.
Lindsay, J. I., Inc., Richmond, Va.
Lombard Iron Works, Augusta, Ga.
Manning, Maxwell & Moore, Inc., New York, N. Y.
Mecklenburg Iron Works, Charlotte, N. C.
Nurdyke & Marmon Co., Indianapolis, Ind.
Reuter-Jones Mfg. Co., St. Louis, Mo.
Salem Foundry & Machine Works, Salem, Va.
Smith-Courtney Co., Richmond, Va.
Starr Co., B. F., Baltimore, Md.
Stratton & Bragg Co., Petersburg, Va.
Wolf Co., Chambersburg, Pa.

Mining Machinery. (Gold, Copper, Plate, etc.)
Bartlett & Snow Co., C. O., Cleveland, O.
Jeffrey Mfg. Co., Columbus, O.
McLanahan-Stone Mach. Co., Hollidaysburg, Pa.
Mecklenburg Iron Works, Charlotte, N. C.
Raymond Bros. Impact Pulv. Co., Chicago, Ill.

Mixer Machinery.
Smith Co., T. L., Atlanta, Ga.

Mixing Machinery.
Dunning, W. D., Syracuse, N. Y.
Lynn-Superior Co., The, Cincinnati, O.

Mortar Colors.
Chattanooga Paint Co., Chattanooga, Tenn.

Motor Trucks.
International Motor Co., New York, N. Y.
Schacht Motor Car Co., Cincinnati, Ohio.

Mouldings, Casings, etc.
Massee & Felton Lumber Co., Macon, Ga.

Nails. (Cut.)
Brooks Iron Co., E. & G., Birdsboro, Pa.
La Belle Iron Works, Steubenville, O.

Nails and Spikes.
American Steel & Wire Co., Chicago, Ill.
Republic Iron & Steel Co., Youngstown, O.
Youngstown Sheet & Tube Co., Youngstown, O.

Nitre Pots, Eggs.
Caroline Foundry Co., Baltimore, Md.
Pratt Engineering & Mach. Co., Atlanta, Ga.

Nuts. [See Bolts, Nuts, Rivets, etc.]

Nut Locks. (Railroad.)
Universal Nut & Bolt Lock Co., Newport, Ky.

Office Furniture.
Ruse & Thompson, Baltimore, Md.

Oils. (Lubricating, etc.)
Albany Lubricating Co., New York, N. Y.
Borne-Schrymer Co., New York, N. Y.
Galena Signal Oil Co., Franklin, Pa.
Gulf Refining Co., Pittsburgh, Pa.
Robinson & Son Co., Wm. C., Baltimore, Md.
Texas Co., The, New York, N. Y.

Oil-Burning Appliances.
Petroleum Iron Works Co., Sharon, Pa.

Oil Cans.
Wall Mfg. Supply Co., P., Allegheny, Pa.

Oil Engines. [See Engines (Oil).]

Oil Separators.
Stewart Heater Co., Buffalo, N. Y.

Oil Stones.
Carborundum Co., Niagara Falls, N. Y.
Norton Co., Worcester, Mass.

Oil-Well Machinery.
Keystone Steam Well Mach. Co., Beaver Falls, Pa.
Williams Bros., Ithaca, N. Y.

Ornamental Iron Work.
Belmont Iron Works, Philadelphia, Pa.
Bolles Iron & Wire Works, J. E., Detroit, Mich.
Chattanooga Iron & Wire Wks., Chat'n'ga, Tenn.
Chesapeake Iron Works, Baltimore, Md.
Dow Wire and Iron Works, Louisville, Ky.
Ohio Elevator & Machine Co., The, Columbus, O.
Roanoke Iron Works, Inc., Roanoke, Va.
Schreiber & Sons Co., The L., Cincinnati, O.
Snead Architectural Iron Works, Louisville, Ky.
Southern Wire & Iron Mfg. Co., Dallas, Tex.

Oxy-Acetylene Welding and Cutting Outfit and Supplies.
International Oxygen Co., New York, N. Y.

Oxygen.
International Oxygen Co., New York, N. Y.

Packing. (Asbestos, Metallic, Rubber, Leather, etc.)
Jenkins Bros., New York, N. Y.
Johns-Manville Co., H. W., New York, N. Y.
N. J. Car Spring & Rubber Co., Jersey City, N. J.
Power Specialty Co., New York, N. Y.

Paint. (Bridge.)
Dixon Crucible Co., Jos., Jersey City, N. J.
National Roofing Co., Tonawanda, N. Y.

Paints. (Cold Water.)
Chickamauga Cement Co., Chattanooga, Tenn.

Paint. (Metal Preservative.)
National Roofing Co., Tonawanda, N. Y.

Paint. (Roofing, Building, etc.)
Armistage Mfg. Co., The, Richmond, Va.
Cameron & Barkley Co., Charleston, S. C.
Chattanooga Paint Co., Chattanooga, Tenn.
Dixon Crucible Co., Jos., Jersey City, N. J.
National Roofing Co., Tonawanda, N. Y.
Thompson & Co., Pittsburgh, Pa.

Painting. (Contractors for Bridges, Buildings, etc.)
Dinlaco & Bro., A., Pittsburgh, Pa.

Paint-Making Machinery.
Lynn Superior Co., The, Cincinnati, O.

Paper. (Roofing, Building, Sheathing, etc.)
Armistage Mfg. Co., Richmond, Va.
Barrett Mfg. Co., Philadelphia, Pa.
Berlin Mills Co., Portland, Maine.
Cameron & Barkley Co., Charleston, S. C.

Paper. (Wrapping.)
Berlin Mills Co., Portland, Maine.

Patent Attorneys.
Brown, Eugene C., Washington, D. C.
Chandler & Chandler, Washington, D. C.
Coleman, Watson E., Washington, D. C.
Evans & Co., Victor J., Washington, D. C.
Fitzgerald & Co., W. T., Washington, D. C.
Hamlin, Geo. R., Washington, D. C.
Jones, Bennett S., Washington, D. C.

Patterns.
Roanoke Iron Works, Inc., Roanoke, Va.

Pavement Filler.
Barrett Mfg. Co., Philadelphia, Pa.

Paving. (Contractors for Cressed Wood Block.)
Cressed Wood Block Pav. Co., New Orleans, La.

Paving Contractors.
Consolidated Engineering Co., Baltimore, Md.
Dalway Paving Co., New York, N. Y.

Paving Blocks. (Wood Cress-Resinate.)
Gulfport Cressing Co., Gulfport, Miss.
Southern Wood Preserving Co., Atlanta, Ga.
U. S. Wood Preserving Co., New York, N. Y.

Paving Brick.
Carlyle Paving Brick Co., Portsmouth, O.
Copeland-Ingalls Shale Brick Co., Birm'gh'm, Ala.

Paving Machines. (Bituminous Materials.)
Smith Co., T. L., Atlanta, Ga.

Paving Material.
Dolarway Paving Co., New York, N. Y.

Perforated Metal.
Caldwell & Son, H. W., Chicago, Ill.
Cress Engineering Co., Carbonate, Pa.
Erdle Perforating Co., Rochester, N. Y.
Hendrick Mfg. Co., The, Carbonate, Pa.
Mundt & Sons, Charles, Jersey City, N. J.

Petroleum Refiners.
Gulf Refining Co., Pittsburgh, Pa.
Standard Oil Co., Inc., Louisville, Ky.
Standard Oil Co., Inc., Newark, N. J.

Phosphate Machinery.
Alding Engineering Co., J. R., New York, N. Y.
American Process Co., New York, N. Y.
Bailey-Lehby Co., The, Charleston, S. C.
Cameron & Barkley Co., Charleston, S. C.
Link-Belt Co., Nictown (Philadelphia), Pa.
McLanahan-Stone Mach. Co., Hollidaysburg, Pa.
Pratt Engineering & Mach. Co., Atlanta, Ga.
Raymond Bros. Impact Pulv. Co., Chicago, Ill.
Valk & Murdoch Iron Works, Charleston, S. C.
Walker & Elliott, Wilmington, Del.

Phosphor-Bronze. (Wire Rods, Sheets.)
Phosphor-Bronze Smelting Co., Philadelphia, Pa.

Photo-Engravers.
Baltimore-Maryland Engr. Co., Baltimore, Md.

Pig Iron.
Alabama Con. Coal & Iron Co., Birmingham, Ala.
La Belle Iron Works, Steubenville, O.
Republic Iron & Steel Co., Youngstown, O.
Tennessee Coal, Iron & R. R. Co., Birm'gh'm, Ala.

Pile Drivers.
Vulcan Iron Works, Chicago, Ill.

Piling. (Cressed.)
American Cressed Works, New Orleans, La.
Gulfport Cressing Co., Gulfport, Miss.
Internal Cressing & Const. Co., Galveston, Tex.
Southern Cressing Co., Ltd., Sildell, La.

Pillow Blocks.
Caldwell Co., Inc., W. E., Louisville, Ky.
Golden's Foundry & Machine Co., Columbus, Ga.

Pipe. (Cast Iron.)
American Cast Iron Pipe Co., Birmingham, Ala.
American Pipe & Construction Co., Phila., Pa.
Glamorgan Pipe & Foundry Co., Lynchburg, Va.
McWane Pipe Works, Lynchburg, Va.
U. S. Cast Iron Pipe & Fdy. Co., New York, N. Y.
Wood & Co., R. D., Philadelphia, Pa.

Pipe. (Coil.)
Columbus Iron Works Co., Columbus, Ga.
Frick Co., The, Wyneboro, Pa.
National Pipe Bending Co., New Haven, Conn.
Whitlock Coil Pipe Co., Hartford, Conn.
York Mfg. Co., York, Pa.

Pipe. (Corrugated Culvert.)
American Culvert Mfg. Co., Buschel, Ky.
American Rolling Mill Co., Middletown, O.
Canton Culvert Co., The, Canton, O.
Dixie Culvert & Metal Co., Atlanta, Ga.
Gallion Iron Works Co., Gallion, O.
Harry Steel Co., O. E., St. Louis, Mo.
Kentucky Culvert Mfg. Co., Buschel, Ky.
North Carolina Metal Cyl. Co., Greensboro, N. C.
Virginia Metal Culvert Co., Roanoke, Va.
Virginia Railway Supply Co., Norfolk, Va.

Pipe. (Riveted.)
Abendroth & Root Mfg. Co., Newburgh, N. Y.
Keeler Co., E., Williamsport, Pa.
Petroleum Iron Works Co., Sharon, Pa.
Ruemml-Dawley Mfg. Co., St. Louis, Mo.

Pipe. (Spiral Riveted.)
Abendroth & Root Mfg. Co., Newburgh, N. Y.
American Spiral Pipe Works, Chicago, Ill.

Pipe. (Wood.)
Wyckoff & Son Co., A., Elmira, N. Y.

Pipe. (Wrought.)
La Belle Iron Works, Steubenville, O.
National Tube Co., Pittsburgh, Pa.
Youngstown Sheet & Tube Co., Youngstown, O.

Pipe Bends.
Columbus Iron Works Co., Columbus, Ga.
Whitlock Coil Pipe Co., Hartford, Conn.

Pipe Covering. (Steam.)
Johns-Manville Co., H. W., New York, N. Y.
Southern Pipe Covering Co., Inc., Richmond, Va.
Wyckoff & Son Co., A., Elmira, N. Y.

Pipe Cutting and Threading Machinery.
Saunders' Sons, D., Yonkers, N. Y.
Williams Tool Co., Erie, Pa.

Pipe Fittings.
American Cast Iron Pipe Co., Birmingham, Ala.
Columbus Iron Works Co., Columbus, Ga.
York Mfg. Co., York, Pa.

Pipe Jointing. (Gas and Water Main.)
Leadite Co., Inc., The, Philadelphia, Pa.

Pipe Locator.
Modern Iron Works, Quincy, Ill.

Pipe Unions and Joints.
Dart Mfg. Co., E. M., Providence, R. I.
National Tube Co., Pittsburgh, Pa.
Whitlock Coil Pipe Co., Hartford, Conn.

Pipe Wrenches and Cutters.
Saunders' Sons, D., Yonkers, N. Y.

Pitch.
Barrett Mfg. Co., Philadelphia, Pa.

Planers. (Metal.)
Manning, Maxwell & Moore, Inc., New York, N. Y.

Planing Mill Work.
Massee & Felton Lumber Co., Macon, Ga.

Plaster of Paris.
King & Co., J. B., New York, N. Y.

Plaster.
Security Cement & Lime Co., Baltimore, Md.

Plaster. (Asbestos Cement, Plaster of Paris.)
King & Co., J. B., New York, N. Y.

Plaster Boards.
Hercules Plaster Board Co., Hampton, Va.
King & Co., J. B., New York, N. Y.

Plaster Machinery.
Bartlett & Snow Co., C. O., Cleveland, O.

Plates.
Cincinnati Iron & Steel Co., Cincinnati, O.
Wood Iron & Steel Co., Alan, Philadelphia, Pa.

Pneumatic Tools. [See Tools—Pneumatic.]

Poles. (Wood Cressed.)
American Cressed Wks., New Orleans, La.

Polishing Machinery. (Wheels and Blocks.)
Abrasive Material Co., Philadelphia, Pa.
Carborundum Co., Niagara Falls, N. Y.
Vitrified Wheel Co., Westfield, Mass.

Power Transmission Machinery.
Bailey-Lehby Co., Charleston, S. C.
Baldwin, A. & F., New York, N. Y.
Caldwell Co., Inc., W. E., Louisville, Ky.
Caldwell & Son Co., H. W., Chicago, Ill.
Cresson Co., Geo. V., Philadelphia, Pa.
Erie Clutch & Pulley Co., Erie, Pa.
Golden's Foundry & Machine Co., Columbus, O.
Jeffrey Mfg. Co., Columbus, O.
Jones & Laughlin Steel Co., Pittsburgh, Pa.
Lane Mfg. Co., Montpelier, Vt.
Lindsay, J. I., Inc., Richmond, Va.
Link-Belt Co., Nictown (Philadelphia), Pa.
Morse Chain Co., Ithaca, N. Y.
Nurdyke & Marmon Co., Indianapolis, Ind.
Poole Engineering & Machine Co., Baltimore, Md.
Price Machinery Co., S. M., Norfolk, Va.
Reuter-Jones Mfg. Co., St. Louis, Mo.
Ryersford Fdry. & Mch. Co., Ryersford, Pa.
Schmidt's Sons Co., J. S., Macon

- Presses.** (Balling, Cottonseed Oil, etc., Hydraulic and Power.)
Boomer & Boschert Press Co., Syracuse, N. Y.
Cardwell Machine Co., Richmond, Va.
Continental Gin Co., Birmingham, Ala.
Sinclair-Scott Co., Baltimore, Md.
- Presses.** (Sewer Pipe and Tile.)
Taplin-Rice-Clerkin Co., Akron, O.
- Presses.** (Stamping.)
Bliss Co., E. W., Brooklyn, N. Y.
Lester & Co., Charles, Brooklyn, N. Y.
Stoll Co., D. H., Buffalo, N. Y.
- Preventive for Sap Stain.**
Church & Dwight Co., New York, N. Y.
- Printers.** (Book, Catalog, Job, etc.)
Fleet-McGinley Co., Baltimore, Md.
- Promoters.**
Assets Realization Co., Chicago, Ill.
Electric Bond & Share Co., New York, N. Y.
- Protector Steel.** (Concrete Curb, Steps, etc.)
Steel Protected Concrete Co., Philadelphia, Pa.
- Pulleys.** (Friction Clutch.)
Brown Co., A. & F., New York, N. Y.
Caldwell Co., Inc., W. E., Louisville, Ky.
Caldwell & Son Co., H. W., Chicago, Ill.
Cresson Co., Geo. V., Philadelphia, Pa.
Poole Engineering & Machine Co., Baltimore, Md.
Wood's Sons Co., T. B., Chambersburg, Pa.
- STEEL SPLIT.**
American Pulley Co., Philadelphia, Pa.
- WOOD SPLIT.**
Caldwell Co., Inc., W. E., Louisville, Ky.
Caldwell & Son Co., H. W., Chicago, Ill.
Lane Mfg. Co., Montpelier, Vt.
Saginaw Mfg. Co., Saginaw, Mich.
Salem Foundry & Machine Works, Salem, Va.
- Pulleys, Shafting and Hangers.**
Caldwell Co., Inc., W. E., Louisville, Ky.
Caldwell & Son Co., H. W., Chicago, Ill.
Cresson Co., Geo. V., Philadelphia, Pa.
Golden's Foundry & Machine Co., Columbus, Ga.
Jeffrey Mfg. Co., Columbus, O.
Jones & Laughlin Steel Co., Pittsburgh, Pa.
Lane Mfg. Co., Montpelier, Vt.
Link-Belt Co., Nictown (Philadelphia), Pa.
Nordyke & Marrison Co., Indianapolis, Ind.
Poole Engineering & Machine Co., Baltimore, Md.
Roversford Fdry. & Mch. Co., Roversford, Pa.
Standard Roller Bearing Co., Philadelphia, Pa.
Wood's Sons Co., T. B., Chambersburg, Pa.
- Pumps.** (Air Lift.)
Harris Air Pump Co., Indianapolis, Ind.
- Pumps.** (Boiler Feed.)
Allerger Pump & Condenser Co., New York, N. Y.
Cameron Steam Pump Wks., A. S., New York, N. Y.
Dean Bros. Steam Pump Wks., Indianapolis, Ind.
Goulds Mfg. Co., Seneca Falls, N. Y.
Jeansville Iron Works Co., Hazleton, Pa.
McGowan Co., John H., Cincinnati, O.
Moffatt Machinery Mfg. Co., Charlotte, N. C.
Murray Iron Works Co., Burlington, Ia.
Myers & Bros., F. E., Ashland, O.
Union Steam Pump Co., Battle Creek, Mich.
- Pumps.** (Centrifugal.)
Allerger Pump & Condenser Co., New York, N. Y.
Buffalo Steam Pump Co., Buffalo, N. Y.
De Laval Steam Turbine Co., Trenton, N. J.
Erie Pump & Engine Works, Erie, Pa.
Goulds Mfg. Co., Seneca Falls, N. Y.
Haydon Pump Co., Quincy, Ill.
Jeansville Iron Works Co., Hazleton, Pa.
Morris Machine Works, Baldwinville, N. Y.
Nove Engine Co., Lansing, Mich.
Wood & Co., R. D., Philadelphia, Pa.
Worthington, H. R., Harrison, N. J.
- Pumps.** (Deep Well.)
Hill-Tripp Pump Co., Anderson, Ind.
Keystone Pump & Well Eng. Co., Beaver Falls, Pa.
McGowan Co., John H., Cincinnati, O.
- Pumps.** (Hydraulic.)
Buffalo Steam Pump Co., Buffalo, N. Y.
Cardwell Machine Co., Richmond, Va.
Dean Bros. Steam Pump Wks., Indianapolis, Ind.
Erie Pump & Engine Works, Erie, Pa.
Goulds Mfg. Co., Seneca Falls, N. Y.
- Pumps.** (Lift and Force.)
Goulds Mfg. Co., Seneca Falls, N. Y.
Ingersoll-Rand Co., New York, N. Y.
- Pumps.** (Odorless and Excavating.)
Goulds Mfg. Co., Seneca Falls, N. Y.
- Pumps.** (Pneumatic.)
Harris Air Pump Co., Indianapolis, Ind.
Ingersoll-Rand Co., New York, N. Y.
- Pumps.** (Rotary.)
Goulds Mfg. Co., Seneca Falls, N. Y.
- Pumps.** (Steam.)
Blake & Knowles Steam Pump Works, East Cambridge, Mass.
Blakeslee Mfg. Co., Du Quoin, Ill.
Buffalo Steam Pump Co., Buffalo, N. Y.
Cameron Steam Pump Wks., A. S., New York, N. Y.
Cameron & Barkley Co., Charleston, S. C.
Cook Well Co., The, St. Louis, Mo.
Dean Bros. Steam Pump Wks., Indianapolis, Ind.
Dean Steam Pump Co., Holyoke, Mass.
Gardner Governor Co., Quincy, Ill.
Goulds Mfg. Co., Seneca Falls, N. Y.
Keystone Pump & Well Eng. Co., Beaver Falls, Pa.
McGowan Co., John H., Cincinnati, O.
Murray Iron Works Co., Burlington, Ia.
Price Machinery Co., S. M., Norfolk, Va.
Bydner Pump & Well Co., Richmond, Va.
Union Steam Pump Co., Battle Creek, Mich.
Worthington, H. R., Harrison, N. J.
- Pumps.** (Trench.)
Bond Co., Harold L., Boston, Mass.
C. H. & E. Mfg. Co., Milwaukee, Wis.
Goulds Mfg. Co., Seneca Falls, N. Y.
- Pumps.** (Vacuum.)
Allerger Pump & Condenser Co., New York, N. Y.
Dean Bros. Steam Pump Wks., Indianapolis, Ind.
Goulds Mfg. Co., Seneca Falls, N. Y.
Smith Co., T. L., Atlanta, Ga.
Union Steam Pump Co., Battle Creek, Mich.
- Pumps.** (Water works.)
McGowan Co., John H., Cincinnati, O.
- Pumping Machinery.**
Allis-Chalmers Co., Milwaukee, Wis.
Blakeslee Mfg. Co., Du Quoin, Ill.
Bond Co., Harold L., Boston, Mass.
Cameron Steam Pump Wks., A. S., New York, N. Y.
Cook Well Co., The, St. Louis, Mo.
Dean Bros. Steam Pump Wks., Indianapolis, Ind.
Dean Steam Pump Co., Holyoke, Mass.
Deming Co., Salem, O.
Erie Pump and Engine Works, Erie, Pa.
Fairbanks, Morse & Co., Chicago, Ill.
Goulds Mfg. Co., Seneca Falls, N. Y.
- Harris Air Pump Co., Indianapolis, Ind.**
Keystone Pump & Well Eng. Co., Beaver Falls, Pa.
McGowan Co., John H., Cincinnati, O.
Moffatt Machinery Mfg. Co., Charlotte, N. C.
Morris Machine Works, Baldwinville, N. Y.
Myers & Bros., F. E., Ashland, O.
Norborn Engineering Co., Philadelphia, Pa.
Sydner Pump & Well Co., Richmond, Va.
Union Steam Pump Co., Battle Creek, Mich.
Wood & Co., R. D., Philadelphia, Pa.
Worthington, H. R., Harrison, N. J.
- Punching and Shearing Machinery.**
Bertsch & Co., Cambridge City, Ind.
Bliss Co., E. W., Brooklyn, N. Y.
Long & Allstatter Co., Hamilton, O.
- Pyrites Burners.**
Caroline Foundry Co., Baltimore, Md.
Kratz Engineering & Mach. Co., Atlanta, Ga.
- Quarrying and Stonecutting Machinery.**
Ingersoll-Rand Co., New York, N. Y.
- Railroads.** (Agricultural and Industrial Opportunities.) [See Industrial, Agricultural and Commercial Opportunities.]
- Railroad Equipment and Supplies.** (New and Second-hand.)
American Frog & Switch Co., Hamilton, O.
American Locomotive Co., New York, N. Y.
American Valve & Meter Co., Cincinnati, O.
Bailey-Lebby Co., The, Charleston, S. C.
Baldwin Equipment & Supply Co., Chicago, Ill.
Benjamin Equip. Co., Harry, St. Louis, Mo.
Birmingham Rail & Loco. Co., Birmingham, Ala.
Boston Iron & Metal Co., Baltimore, Md.
Cincinnati Frog & Switch Co., Cincinnati, O.
Foster Co., L. B., Pittsburgh, Pa.
Georgia Car & Locomotive Co., Atlanta, Ga.
Hoffman & Co., R. C., Baltimore, Md.
Hyman-Michaels Co., Chicago, Ill.
Indiana Steel & Iron Co., Pittsburgh, Pa.
Kilby Frog & Switch Co., Birmingham, Ala.
MacLeary, J. H., Suffolk, Va.
Males Co., Cincinnati, O.
Manning, Maxwell & Moore, Inc., New York, N. Y.
Mathies Iron & Metal Co., G., St. Louis, Mo.
May & Turner Co., Atlanta, Ga.
National Iron & Steel Co., Houston, Tex.
Newhall Eng. Co., Geo. M., Philadelphia, Pa.
Papin Co., R. K., St. Louis, Mo.
Pickett Co., Inc., H. W., Philadelphia, Pa.
Q & C Co., New York, N. Y.
Read Co., Howard W., Philadelphia, Pa.
Robinson & Orr, Pittsburgh, Pa.
Sherwood, E. C., New York, N. Y.
Smith-Courtney Co., Richmond, Va.
Southern Iron & Equipment Co., Atlanta, Ga.
Southern Supply Co., Norfolk, Va.
Steel Rail Supply Co., The, New York, N. Y.
United States Rail Co., Cumberland, Md.
Vulcan Iron Works, Wilkes-Barre, Pa.
Weir Frog Co., Cincinnati, O.
Wilson & Co., E. H., Philadelphia, Pa.
Zelicker Supply Co., Walter A., St. Louis, Mo.
- Railroad Frogs and Switches.**
American Frog & Switch Co., Hamilton, O.
Cincinnati Frog & Switch Co., Cincinnati, O.
Kilby Frog & Switch Co., Birmingham, Ala.
Mathies Iron & Metal Co., G., St. Louis, Mo.
May & Turner Co., Atlanta, Ga.
Robinson & Orr, Pittsburgh, Pa.
Sweet's Steel Co., Williamsport, Pa.
Weir Frog Co., Cincinnati, O.
- Railroad Tie.** (Reinforced Concrete.)
Universal Concrete Tie Co., New Orleans, La.
- Rails.** (Steel.)
Carnegie Steel Co., Pittsburgh, Pa.
Foster Co., L. B., Pittsburgh, Pa.
Franks, J. E., Atlanta, Ga.
Hoffman & Co., R. C., Baltimore, Md.
Hyde Bros. & Co., Pittsburgh, Pa.
Hyman-Michaels Co., Chicago, Ill.
Indiana Steel & Iron Co., Pittsburgh, Pa.
Levis & Co., Henry, Philadelphia, Pa.
MacLeary, J. H., Suffolk, Va.
Mathies Iron & Metal Co., G., St. Louis, Mo.
May & Turner Co., Atlanta, Ga.
National Iron & Steel Co., Houston, Tex.
Newhall Eng. Co., Geo. M., Philadelphia, Pa.
Ohio Iron & Metal Co., Chicago, Ill.
Papin Co., R. K., St. Louis, Mo.
Republie Iron & Steel Co., Youngstown, O.
Robinson & Orr, Pittsburgh, Pa.
Sherwood, E. C., New York, N. Y.
Southern Iron & Equipment Co., Atlanta, Ga.
Steel Rail Supply Co., The, New York, N. Y.
Sweet's Steel Co., Williamsport, Pa.
Tennessee Coal, Iron & R. R. Co., B'gh'm, Ala.
United States Rail Co., Cumberland, Md.
Wilson & Co., E. H., Philadelphia, Pa.
Zelicker Supply Co., Walter A., St. Louis, Mo.
- Rail Braces, Crossings, etc.** (See R. R. Frogs and Switches.)
- Rail Joints.**
Q & C Co., New York, N. Y.
- Railways.** (Industrial.)
Chase, Fdry. & Mfg. Co., Columbus, O.
Hunt Co., C. W., West New Brighton, N. Y.
Link-Belt Co., Nictown (Philadelphia), Pa.
- Rams.** (Hydraulic.) [See Hydraulic Rams.]
- Reamers.**
Morse Twist Drill & Mch. Co., New Bedford, Mass.
- Reinforcing Bars.** (For Concrete Constr.)
Carnegie Steel Co., Pittsburgh, Pa.
Concrete Steel Co., New York, N. Y.
Concrete Steel Engineering Co., New York, N. Y.
Franklin Steel Co., Franklin, Pa.
- Repairing.** (Power Plants.)
Strickland Mch. Co., Richmond, Va.
- Riveters.** (Pneumatic.)
Chicago Pneumatic Tool Co., Chicago, Ill.
Independent Pneumatic Tool Co., Chicago, Ill.
Ingersoll-Rand Co., New York, N. Y.
- Road Machinery.**
Austin-Western Co., Ltd., The, Chicago, Ill.
Buffalo Steam Roller Co., Buffalo, N. Y.
Case Threshing Mch. Co., Inc., J. I., Racine, Wis.
Creasy, Walter, Gloucester, Mass.
Gallon Iron Works Co., Gallon, O.
Glide Road Machine Co., Minneapolis, Minn.
Iroquois Iron Works, Buffalo, N. Y.
Kelly Springfield Road Roller Co., Springfield, O.
Syracuse Chilled Plow Co., Syracuse, N. Y.
Universal Road Mch. Co., Kingston, N. Y.
Western Wheeled Scraper Co., Aurora, Ill.
- Roadmaking Materials.**
Standard Oil Co., Inc., Louisville, Ky.
Standard Oil Co., Inc., Newark, N. J.
Texas Co., The, New York, N. Y.
- Road Roller.** (Steam.)
Austin-Western Co., Ltd., The, Chicago, Ill.
Buffalo Steam Roller Co., Buffalo, N. Y.
Case Threshing Mch. Co., Inc., J. I., Racine, Wis.
Iroquois Iron Works, Buffalo, N. Y.
Kelly Springfield Road Roller Co., Springfield, O.
Universal Road Mch. Co., Kingston, N. Y.
- Road Oil.**
Gulf Refining Co., Pittsburgh, Pa.
Standard Oil Co., Inc., Louisville, Ky.
Standard Oil Co., Inc., Newark, N. J.
Texas Co., The, New York, N. Y.
- Road Plows.**
Case Threshing Mch. Co., Inc., J. I., Racine, Wis.
Syracuse Chilled Plow Co., Syracuse, N. Y.
- Road Preservatives.**
Gulf Refining Co., Pittsburgh, Pa.
Standard Oil Co., Inc., Louisville, Ky.
Standard Oil Co., Inc., Newark, N. J.
Texas Co., The, New York, N. Y.
- Road Sprayers.** (Oil, Tar, Asphalt.)
Creasy, Walter, Gloucester, Mass.
- Rock Crushers.** [See Crushers, Rock.]
- Roll Grinding and Corrugating.** (Flour Mills.)
Venatch & Co., L. R., Louisville, Ky.
- Rolls.** (Bending and Straightening.)
Bertsch & Co., Cambridge City, Ind.
- Roofers' and Tinners' Supplies.**
Merchant & Evans Co., Philadelphia, Pa.
- Roofing.** (Contractors for Laying.)
Dinisco & Bro., A., Pittsburgh, Pa.
- Roofing.** (Felt, Tar, Asbestos, Asphalt, Tin, etc.)
Allen, Herbert F. L., Washington, D. C.
American Sheet & Tin Plate Co., Pittsburgh, Pa.
Armstrong Mfg. Co., Richmond, Va.
Asphalt Ready Roofing Co., New York, N. Y.
Barber Asphalt Paving Co., Philadelphia, Pa.
Barrett Mfg. Co., Philadelphia, Pa.
Cameron & Barkley Co., Charleston, S. C.
Cincinnati Sheet Metal & Rfg. Co., Cincinnati, O.
Johns-Manville Co., H. W., New York, N. Y.
National Roofing Co., Tonawanda, N. Y.
- Roofing.** (Metal Shingles.) [See Shingles, Metal.]
Cincinnati Sheet Metal & Rfg. Co., Cincinnati, O.
Cortright Metal Roofing Co., Philadelphia, Pa.
Edwards Mfg. Co., The, Cincinnati, O.
Milwaukee Corrugating Co., Milwaukee, Wis.
Moesch-Edwards Corrugating Co., Covington, Ky.
- Roofing.** (Slate.)
East Bangor Consol. Slate Co., East Bangor, Pa.
Genuine Bangor Slate Co., Easton, Pa.
Hower, J. K., Slattington, Pa.
Johnson, E. J., New York, N. Y.
Reynolds Asphalt Shingle Co., H. M., Grand Rapids, Mich.
- Roofing Tile.**
National Roofing Tile Co., Lima, O.
- Roofing and Siding.** (Metal.)
American Rolling Mill Co., Middletown, O.
American Sheet & Tin Plate Co., Pittsburgh, Pa.
Cameron & Barkley Co., Charleston, S. C.
Cincinnati Sheet Metal & Rfg. Co., Cincinnati, O.
Cortright Metal Roofing Co., Philadelphia, Pa.
Edwards Mfg. Co., The, Cincinnati, O.
Hyndman Roofing Co., Cincinnati, O.
Milwaukee Corrugating Co., Milwaukee, Wis.
Moesch-Edwards Corrugating Co., Covington, Ky.
New Orleans Rfg. & Metal Wks., New Orleans, La.
Tennessee Metal Culvert Co., Nashville, Tenn.
Youngstown Sheet & Tube Co., Youngstown, O.
- Rope.**
American Mfg. Co., New York, N. Y.
Broderick & Bascom Rope Co., St. Louis, Mo.
Columbian Rope Co., Auburn, N. Y.
International Cotton Mills Corp., New York, N. Y.
Plymouth Cordage Co., North Plymouth, Mass.
- Rope.** (Transmission and Hoisting.)
American Mfg. Co., New York, N. Y.
American Steel & Wire Co., Chicago, Ill.
Broderick & Bascom Rope Co., St. Louis, Mo.
Caldwell Co., Inc., W. E., Louisville, Ky.
Columbian Rope Co., Auburn, N. Y.
Hunt Co., C. W., West New Brighton, N. Y.
Plymouth Cordage Co., North Plymouth, Mass.
Wood's Sons Co., T. B., Chambersburg, Pa.
- Rope Drives.**
Brown Co., A. & F., New York, N. Y.
Caldwell Co., Inc., W. E., Louisville, Ky.
Caldwell & Son, H. W., Chicago, Ill.
Cresson Co., Geo. V., Philadelphia, Pa.
Jones & Laughlin Steel Co., Pittsburgh, Pa.
Wood's Sons Co., T. B., Chambersburg, Pa.
- Rope Machinery.**
Haskell-Dawes Machine Co., Boston, Mass.
- Rubber Goods.**
Eureka Fire Hose Mfg. Co., New York, N. Y.
New Jersey Car Sp'g & Rub. Co., Jersey City, N. J.
- Rules.** (Steel.)
Lufkin Rule Co., Saginaw, Mich.
Starrett Co., L. S., Athol, Mass.
- Safes and Vaults.**
York Safe & Lock Co., York, Pa.
- Sand.**
Arundel Sand & Gravel Co., Baltimore, Md.
Carter, L. A., New Orleans, La.
Kirkpatrick Sand & Cem. Co., Birmingham, Ala.
Lathrop & Co., C. P., Richmond, Va.
- Sand Rammers.**
Chicago Pneumatic Tool Co., Chicago, Ill.
- Sap Stain Preventive.**
Church & Dwight Co., New York, N. Y.
- Sash Chain.**
Niagara Falls Metal Stamping Works, Niagara Falls, N. Y.
- Saws.**
Gerlach Co., Peter, Cleveland, O.
Huth Bros. Saw Mfg. Co., Rochester, N. Y.
Smith Machine Co., H. B., Smithville, N. J.
Sydner Pump & Well Co., Richmond, Va.
- Saws.** (Band.)
Smith Machine Co., H. B., Smithville, N. J.
- Saws.** (Hack.)
Starrett Co., L. S., Athol, Mass.
- Sawmill Dogs.**
Knight Manufacturing Co., Canton, Ohio.
Soule Steam Feed Works, Meridian, Miss.
- Sawmills.**
Gainesville Iron Works, Gainesville, Ga.
Gibbes Machinery Co., Columbia, S. C.
Lane Mfg. Co., Montpelier, Vt.
- Sawmill Machinery.**
Bailey-Lebby Co., Charleston, S. C.
Cameron & Barkley Co., Charleston, S. C.
Case Turbine Mfg. Co., Orange, Mass.
Knight Manufacturing Co., Canton, Ohio.
Lane Mfg. Co., Montpelier, Vt.
Mecklenburg Iron Works, Charlotte, N. C.
Price Mch. Co., S. M., Norfolk, Va.
Schoffel's Sons Co., J. S., Macon, Ga.
Southern Engine & Boiler Works, Jackson, Tenn.
Sydner Pump & Well Co., Richmond, Va.
Union Iron Works Co., Selma, Ala.
- Saw Rigs.** (Portable.)
C. H. & E. Mfg. Co., Milwaukee, Wis.
- Saw Sharpeners.**
Abrasive Material Co., Philadelphia, Pa.
Carborundum Co., Niagara Falls, N. Y.
Norton Co., Worcester, Mass.
Vitrified Wheel Co., Westfield, Mass.
- Saw Sharpeners and Files.** (Cotton Gln.)
Carver Cotton Gln Co., East Bridgewater, Mass.
- Scales.**
Howe Scale Co., New York, N. Y.
Rome Scale & Mfg. Co., Rome, Ga.
Standard Scale & Supply Co., Pittsburgh, Pa.
- Scrap Iron and Metals.**
Kander & Co., H., Bowling Green, Ohio.
- Screening Apparatus.**
Walker & Elliott, Wilmington, Del.
- Screens.** (Fly, Window and Door.)
Cincinnati Mfg. Co., Cincinnati, O.
New Jersey Wire Cloth Co., Trenton, N. J.
- Screens.** (Mining.)
Cresson Co., Geo. V., Philadelphia, Pa.
Cross Engineering Co., Carbondale, Pa.
Erdle Perforating Co., Rochester, N. Y.
Hendrick Mfg. Co., Carbondale, Pa.
Jeffrey Mfg. Co., Columbus, O.
Mundt & Sons, Charles, Jersey City, N. J.
McLanahan-Stone Mach. Co., Hollidaysburg, Pa.
New Jersey Wire Cloth Co., Trenton, N. J.
Taplin-Rice-Clerkin Co., Akron, O.
- Searchlights.**
Ft. Wayne Electric Works, Ft. Wayne, Ind.
- Separators.** (Dust.)
Buffalo Forge Co., Buffalo, N. Y.
Raymond Bros. Impact Pulv. Co., Chicago, Ill.
- Sewer Pipe Machinery.**
Taplin-Rice-Clerkin Co., Akron, O.
- Sewer Pipe.** (Vitrified.)
Bibb Sewer Pipe Co., Macon, Ga.
Cannelton Sewer Pipe Co., Cannelton, Ind.
Pittsburgh-Buffalo Co., Pittsburgh, Pa.
Pomona Terra-Cotta Co., Pomona, N. C.
Stevens Sons Co., H., Macon, Ga.
- Shafting.** (Polished Steel.)
Field & Co., Inc., Philadelphia, Pa.
Jones & Laughlin Steel Co., Pittsburgh, Pa.
Republic Iron & Steel Co., Youngstown, O.
- Shafting.** (See Pulleys, Shafting and Hangers.)
- Shapers.**
Stephens Shaper Co., John, Cincinnati, O.
- Sharpening Stones.**
Norton Co., Worcester, Mass.
Vitrified Wheel Co., Westfield, Mass.
- Shears.** (Metal.)
Bertsch & Co., Cambridge City, Ind.
Stoll Co., D. H., Buffalo, N. Y.
- Sheet Brass and Copper.**
Hussey & Co., C. G., Pittsburgh, Pa.
McKenna Bros. Brass Co., Pittsburgh, Pa.
Merchant & Evans Co., Philadelphia, Pa.
- Sheet Metal Working Machinery.**
Bertsch & Co., Cambridge City, Ind.
Bliss Co., E. W., Brooklyn, N. Y.
- Sheet Steel and Iron.**
American Rolling Mill Co., Middletown, O.
American Sheet & Tin Plate Co., Pittsburgh, Pa.
Cincinnati Iron & Steel Co., Cincinnati, O.
Le Belle Iron Works, Steubenville, O.
Republic Iron & Steel Co., Youngstown, O.
Tennessee Coal, Iron & R. R. Co., B'gh'm, Ala.
Wood Iron & Steel Co., Alan, Philadelphia, Pa.
Youngstown Sheet & Tube Co., The, Youngstown, O.
- Shingles.** (Asphalt, Slate.)
Reynolds Asphalt Shingle Co., H. M., Grand Rapids, Mich.
- Shingles.** (Metal.)
Burris & Co., John T., Anderson, S. C.
Chattanooga Rfg. & Fdy. Co., Chattanooga, Tenn.
Cincinnati Sheet Metal & Rfg. Co., Cincinnati, O.
Cortright Metal Roofing Co., Philadelphia, Pa.
Edwards Mfg. Co., Cincinnati, O.
Hyndman Roofing Co., Cincinnati, O.
Milwaukee Corrugating Co., Milwaukee, Wis.
Moesch-Edwards Corrugating Co., Covington, Ky.
- Shredders.** (Bark, Chip, etc.)
Williams Pat. Crush. & Pul. Co., The, Chicago, Ill.
- Shutters.** (Iron.)
Bolles Iron & Wire Works, J. E., Detroit, Mich.
Chesapeake Iron Works, Baltimore, Md.
- Shutters.** (Steel Rolling.)
Kinneair Mfg. Co., Columbus, O.
- Shutters.** (Tin Clad.)
Victor Mfg. Co., Newburyport, Mass.
- Signs.** (Metal Lithographed.)
Southern Can Co., Baltimore, Md.
- Signs.** (Road, Street, Outdoor, Adv.)
Indestructible Sign Co., Columbus, O.
- Sightlights and Cornices.**
Milwaukee Corrugating Co., Milwaukee, Wis.
New Orleans Rfg. & Metal Wks., New Orleans, La.
- Slate Roofing.** [See Roofing (Slate).]
- Slate.** (Structural, Sanitary, etc.)
East Bangor Consol. Slate Co., East Bangor, Pa.
Genuine Bangor Slate Co., Easton, Pa.
Hower, J. K., Slattington, Pa.
- Sluice Gates and Appliances.**
Caldwell-Wilcox Co., Newburgh, N. Y.
- Smokestacks.** (Iron and Steel.)
Chattanooga Boiler & Tank Co., Chattanooga, Tenn.
Keeler Co., E., Williamsport, Pa.
Lombard Iron Works, Augusta, Ga.
Petroleum Iron Works Co., Sharon, Pa.
Ruemmel-Dawley Mfg. Co., St. Louis, Mo.
Schoffel's Sons Co., J. S., Macon, Ga.
Virginia Bridge & Iron Co., Roanoke, Va.
- Smokestacks.** (Steel-Concrete.)
Weber Chimney Co., Chicago, Ill.

- Spikes. (Railroad.)**
Hoffman & Co., R. C., Baltimore, Md.
- Spikes. (See Nails and Spikes.)**
- Sprayers. (Oil, Tar, Asphalt.)**
Creasy, Walter, Gloucester, Mass.
- Springs. (Machinery, Railway, Spiral.)**
American Steel & Wire Co., Chicago, Ill.
Dary Spring Works, New York, N. Y.
Raymond Mfg. Co., Ltd., Corry, Pa.
- Sprinklers. (Automatic.)**
General Fire Extinguisher Co., Providence, R. I.
- Sprinkler Systems. (Automatic.)**
General Fire Extinguisher Co., Providence, R. I.
- Stamp Mills.**
Mecklenburg Iron Works, Charlotte, N. C.
- Stamps. (Brass, Rubber.)**
Baltimore Office Supply Co., Baltimore, Md.
Bennett Rubber Stamp & Seal Co., Atlanta, Ga.
- Standpipes.**
Chattanooga Boiler & Tank Co., Chat'n'ga, Tenn.
Des Moines Bridge & Iron Co., Pittsburgh, Pa.
Hartley Boiler Works, Montgomery, Ala.
Keeler Co., E., Williamsport, Pa.
Petroleum Iron Works Co., Sharon, Pa.
Rennell-Dawley Mfg. Co., St. Louis, Mo.
- Stapling Machinery. (Fruit Package Basket, etc.)**
Serrano Machine Co., St. Joseph, Mich.
- Stationers. (Envelopes, Letter and Bill Heads, etc.)**
Young & Selden Co., Baltimore, Md.
- Steam Feeds.**
Sole Steam Feed Works, Meridian, Miss.
- Steam Fitters' Supplies.**
Sanders' Sons, D., Yonkers, N. Y.
- Steam Heating.**
Keeler Co., E., Williamsport, Pa.
Peck-Hammond Co., The, Cincinnati, O.
- Steamship Lines.**
Baltimore Steam Packet Co., Baltimore, Md.
Chesapeake Steamship Co., Baltimore, Md.
Merchant & Miners' Trans. Co., Baltimore, Md.
- Steam Separators.**
Hopes Mfg. Co., Springfield, O.
Lindstrom's Mach. Wks., John T., Allentown, Pa.
- Steam Shovel Chains.**
Standard Chain Co., Pittsburgh, Pa.
Weimer Chain & Iron Co., Lebanon, Pa.
- Steam Shovels. (See Excavating Machinery.)**
- Steam Specialties.**
Kennedy Valve Mfg. Co., Elmira, N. Y.
Powell Co., Wm., Cincinnati, O.
- Steam Traps.**
Jenkins Bros., New York, N. Y.
Lindstrom's Mach. Wks., John T., Allentown, Pa.
Pratt & Cady Co., Hartford, Conn.
- Steel.**
American Rolling Mill Co., Middletown, O.
Dietrich Bros., Baltimore, Md.
Field & Co., Inc., Philadelphia, Pa.
Hoffman & Co., R. C., Baltimore, Md.
Jones & Laughlin Steel Co., Pittsburgh, Pa.
La Belle Iron Works, Steubenville, O.
Oliver Iron & Steel Co., Pittsburgh, Pa.
Republic Iron & Steel Co., Youngstown, O.
Tennessee Coal, Iron & R. R. Co., Birmingham, Ala.
Wood Iron & Steel Co., Alan, Philadelphia, Pa.
- Steel. (Tool.)**
Field & Co., Inc., Philadelphia, Pa.
Jennings & Sons, Inc., Wm., St. Louis, Mo.
McKenna Iron, Brass Co., Pittsburgh, Pa.
- Steel. (Vanadium.)**
Carnegie Steel Co., Pittsburgh, Pa.
- Steel Buildings. (Designers, Builders.)**
Amer. Bridge Co. of New York, New York, N. Y.
Champion Bridge Co., Wilmington, Ohio.
Chesapeake Iron Works, Baltimore, Md.
Farris Bridge Co., Pittsburgh, Pa.
Phoenix Iron Co., Philadelphia, Pa.
Republic Iron & Steel Co., Youngstown, O.
Roanoke Bridge & Iron Co., Roanoke, Va.
Schreiber & Sons Co., The L., Cincinnati, O.
Snead Architectural Iron Works, Louisville, Ky.
Virginia Bridge & Iron Co., Roanoke, Va.
- Steel Casting.**
Acme Steel & Malleable Iron Wks., Buffalo, N. Y.
Crescent Steel Castings Co., Lansdowne, Pa.
Hoffman & Co., R. C., Baltimore, Md.
Reliance Steel Casting Co., Pittsburgh, Pa.
- Steel Plate Work.**
Casey-Hedges Co., Chattanooga, Tenn.
Chattanooga Boiler & Tank Co., Chat'n'ga, Tenn.
Hoffman & Co., R. C., Baltimore, Md.
Phoenix Iron Co., Philadelphia, Pa.
Republic Iron & Steel Co., Youngstown, O.
Roanoke Bridge & Iron Co., Roanoke, Va.
Rennell-Dawley Mfg. Co., St. Louis, Mo.
- Steel Protector. (Concrete Curb Steps, etc.)**
[See Protector Steel.]
- Steel Sheet Piling.**
Jones & Laughlin Steel Co., Pittsburgh, Pa.
- Stencils.**
Baltimore Office Supply Co., Baltimore, Md.
- Stirrups. (Building.)**
Chesapeake Iron Works, Baltimore, Md.
- Stock Certificates, Bonds and Seals.**
Baltimore Office Supply Co., Baltimore, Md.
- Stokers. (Mechanical.)**
Babcock & Wilcox Co., New York, N. Y.
Harrisburg Fdry. & Mach. Wks., Harrisburg, Pa.
Westinghouse Machine Co., Pittsburgh, Pa.
- Storage Batteries.**
Eac. Storage Battery Co., The, Philadelphia, Pa.
Lee Electric Co., Baltimore, Md.
Westinghouse Machine Co., Pittsburgh, Pa.
- Strainers.**
Cameron Steam Pump Wks., A. S., New York, N. Y.
- Structural Steel and Iron.**
Amer. Bridge Co. of New York, New York, N. Y.
Belmont Iron Works, Philadelphia, Pa.
Carnegie Steel Co., Pittsburgh, Pa.
Champion Bridge Co., Wilmington, Ohio.
Chesapeake Iron Works, Baltimore, Md.
Cincinnati Iron & Steel Co., Cincinnati, O.
Des Moines Bridge & Iron Co., Pittsburgh, Pa.
Dietrich Bros., Baltimore, Md.
Hoffman & Co., R. C., Baltimore, Md.
Jones & Laughlin Steel Co., Pittsburgh, Pa.
Memphis Bridge Co., Memphis, Tenn.
- Phoenix Iron Co., Philadelphia, Pa.**
Republic Iron & Steel Co., Youngstown, O.
Roanoke Bridge & Iron Co., Roanoke, Va.
Schreiber & Sons Co., The L., Cincinnati, O.
Snead Architectural Iron Works, Louisville, Ky.
Tennessee Coal, Iron & R. R. Co., Birmingham, Ala.
Virginia Bridge & Iron Co., Roanoke, Va.
York Bridge Co., York, Pa.
- Stamp Pullers.**
Zimmerman Steel Co., M. R., Lone Tree, Ia.
- Sugar-Mill Machinery.**
Pratt Engineering & Mach. Co., Atlanta, Ga.
- Sulphur.**
Union Sulphur Co., New York, N. Y.
- Super-Heaters. (Steam.)**
Babcock & Wilcox Co., New York, N. Y.
Power Specialty Co., New York, N. Y.
- Surveying Instruments.**
Weber & Co., F., Philadelphia, Pa.
- Switchboards, Switches, etc.**
Engberg's Elect. & Mech. Wks., St. Joseph, Mich.
Fort Wayne Electric Works, Fort Wayne, Ind.
General Electric Co., Schenectady, N. Y.
Westinghouse Elect. & Mfg. Co., Pittsburgh, Pa.
- Switches. (See Railroad Frogs and Switches.)**
- Switchstands.**
American Valve & Meter Co., Cincinnati, O.
Weir Frog Co., Cincinnati, O.
- Tackle Blocks. (For Wire or Manila Rope.)**
Broderick & Bascom Rope Co., St. Louis, Mo.
Patterson Co., W. W., Pittsburgh, Pa.
- Talc and Soapstone. (Crayons, Pencils, Powder.)**
Georgia Talc Co., Asheville, N. C.
- Tanks. (Iron and Steel.)**
American Water Softener Co., Philadelphia, Pa.
Caldwell Co., Inc., W. E., Louisville, Ky.
Case Threshing Mch. Co., Inc., J. I., Racine, Wis.
Casey-Hedges Co., Chattanooga, Tenn.
Chattanooga Boiler & Tank Co., Chat'n'ga, Tenn.
Cole Mfg. Co., R. D., Newnan, Ga.
Des Moines Bridge & Iron Co., Pittsburgh, Pa.
Gem City Boiler Co., Dayton, O.
Harry Bros. Co., Newport, Ky.
Hartley Boiler Works, Montgomery, Ala.
Keeler Co., E., Williamsport, Pa.
Lombard Iron Works, Augusta, Ga.
Lookout Boiler & Mfg. Co., Chattanooga, Tenn.
New Orleans Rfg. & Met. Wks., New Orleans, La.
Oil City Boiler Co., Oil City, Pa.
Petroleum Iron Works Co., Sharon, Pa.
Rennell-Dawley Mfg. Co., St. Louis, Mo.
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Schofield's Sons Co., J. S., Macon, Ga.
Sydnor Pump & Well Co., Richmond, Va.
Tennessee Metal Culvert Co., Nashville, Tenn.
Virginia Bridge & Iron Co., Roanoke, Va.
Walsh & Weldner Boiler Co., Chattanooga, Tenn.
- Tanks. (Wood.)**
Baltimore Cooperage Co., Baltimore, Md.
Caldwell Co., Inc., W. E., Louisville, Ky.
Davis & Son, R. P., Palmdale, Fla.
Sydnor Pump & Well Co., Richmond, Va.
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Larkin Rule Co., Saginaw, Mich.
Starrett Co., L. S., Athol, Mass.
- Telephones. (Supplies, Equipment.)**
Piedmont Electric Co., Asheville, N. C.
Western Electric Co., New York, N. Y.
- Telephone Cable.**
Western Electric Co., New York, N. Y.
- Telephone Poles. (See Cross-ties.)**
Intern'l Cro. & Constr. Co., Galveston, Tex.
Western Electric Co., New York, N. Y.
- Terracotta.**
Atlanta Terra-Cotta Co., Atlanta, Ga.
Bibb Sewer Pipe Co., Macon, Ga.
Maryland Terra-Cotta Co., Baltimore, Md.
Pomona Terra-Cotta Co., Pomona, N. C.
Southern Building Material Co., Norfolk, Va.
Stevens' Sons Co., H., Macon, Ga.
- Threshers.**
Cardwell Machine Co., Richmond, Va.
Case Threshing Mch. Co., Inc., J. I., Racine, Wis.
- Ties. (Crescoted.)**
American Crescote Wks., New Orleans, La.
- Tie Plates. (Railways.)**
Virginia Railway Supply Co., Norfolk, Va.
- Tile. (Drain, Floor, etc.)**
Amer. Enam. Brick & Tile Co., New York, N. Y.
Bibb Sewer Pipe Co., Macon, Ga.
Crescote Brick & Tile Co., Milledgeville, Ga.
- Tile. (Mosaic.)**
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- Tile. (Roofing.)**
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Cardwell Machine Co., Richmond, Va.
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Independent Pneumatic Tool Co., Chicago, Ill.
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Cole Mfg. Co., R. D., Newnan, Ga.
Des Moines Bridge & Iron Co., Pittsburgh, Pa.
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Quincy Engine Co., Quincy, Pa.
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Rome Scale & Mfg. Co., Rome, Ga.
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Cook Well Co., St. Louis, Mo.
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National Tube Co., Pittsburgh, Pa.
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Lefell & Co., James, Springfield, O.
Poele Engineering & Mach. Co., Baltimore, Md.
Salem Foundry and Machine Works, Salem, Va.
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De Laval Steam Turbine Co., Trenton, N. J.
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General Electric Co., Schenectady, N. Y.
Southwark Fdry. & Mch. Co., Philadelphia, Pa.
Terry Steam Turbine Co., New York, N. Y.
Western Electric Co., New York, N. Y.
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Broderick & Bascom Rope Co., St. Louis, Mo.
- Turntables.**
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- Twisting Machinery.**
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Pratt & Cady Co., Hartford, Conn.
York Mfg. Co., York, Pa.
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- Veneer Machines.**
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Troy Wagon Works Co., Troy, O.
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- Wall Ties.**
Niagara Falls Metal Stamping Works, Niagara Falls, N. Y.
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Cameron & Barkley Co., Charleston, S. C.
McLanahan-Stone Mach. Co., Hollidaysburg, Pa.
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- Water Meters.**
American Valve & Meter Co., Cincinnati, O.
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Ceresit Waterproofing Co., Chicago, Ill.
National Roofing Co., Tonawanda, N. Y.
- Waterproofing. (For Cement Mortar.)**
Ceresit Waterproofing Co., Chicago, Ill.
- Waterproofing. (For Concrete.)**
Barrett Mfg. Co., Philadelphia, Pa.
Ceresit Waterproofing Co., Chicago, Ill.
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- Water-Wheels. (See Turbines. (Hydraulic.))**
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American Cast Iron Pipe Co., Birmingham, Ala.
American Pipe & Constr. Co., Philadelphia, Pa.
Bibb Sewer Pipe Co., Macon, Ga.
Bourbon Copper & Brass Wks. Co., Cincinnati, O.
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Glamorgan Pipe & Foundry Co., Lynchburg, Va.
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Keystone Pump & Well Eng. Co., Beaver Falls, Pa.
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McWane Pipe Works, Lynchburg, Va.
Pomona Terra-Cotta Co., Pomona, N. C.
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Fullman Auto. Ventilator Mfg. Co., York, Pa.
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Hughes-Specialty Well Drill Co., Charleston, S. C.
Stothoff Bros., Flemington, N. J.
Sydnor Pump & Well Co., Richmond, Va.
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Cook Well Co., The, St. Louis, Mo.
Keystone Pump & Well Eng. Co., Beaver Falls, Pa.
Williams Bros., Ithaca, N. Y.
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Oliver Mfg. Co., W. J., Knoxville, Tenn.
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- Window Guards. (Wire.)** [See Wire Goods.]
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Caldwell & Sons Co., The H. W., Chicago, Ill.
Meyers Mfg. Co., Fred J., Hamilton, O.
New Jersey Wire Cloth Co., Trenton, N. J.
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Cincinnati Mfg. Co., Cincinnati, O.
Dow Wire and Iron Works, Louisville, Ky.
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Dufur, Baggott & Co., Baltimore, Md.
Meyers Mfg. Co., The Fred J., Hamilton, O.
New Jersey Wire Cloth Co., Trenton, N. J.
- Wire Netting.**
American Steel & Wire Co., Chicago, Ill.
New Jersey Wire Cloth Co., Trenton, N. J.
- Wire Rope.**
American Steel & Wire Co., Chicago, Ill.
Broderick & Bascom Rope Co., St. Louis, Mo.
Roebeling's Sons Co., J. A., Trenton, N. J.
Williamsport Wire Rope Co., Williamsport, Pa.
Youngstown Sheet & Tube Co., Youngstown, O.
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Broderick & Bascom Rope Co., St. Louis, Mo.
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- Wood-Fiber Plaster.**
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Knight Manufacturing Co., Canton, O.
Lane Mfg. Co., Montpelier, Vt.
Ober Mfg. Co., Chagrin Falls, O.
Slitmer & Sons, Samuel J., Milton, Pa.
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Smith Machine Co., H. B., Smithville, N. J.
Wilmington Iron Works, Wilmington, N. C.
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Columbian Rope Co., Auburn, N. Y.
Plymouth Cordage Co., North Plymouth, Mass.

Ads. marked * appear every other week.
Ads. marked † appear in first issue of the month.
Ads. marked ‡ not in this issue.

Alphabetical Index of Advertisers.

"CLASSIFIED OPPORTUNITIES"
See pages 82 and 83.
"PROPOSALS"
See pages 84 and 85.

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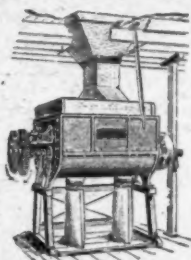
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After years of experimenting the
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Not since the discontinuance of
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THE PUREST IRON BASE
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**DELTA FILE WORKS,****PHILADELPHIA, PA.**

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are *heavier* and consequently *stronger* than any other reg-
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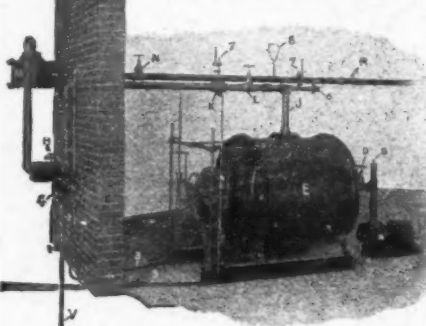
The yokes are wide, giving room for ample stuffing boxes,
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They are fitted with Renewable Discs, and the raised seat
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Write our Paint Department for long service records.
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PITTSBURG-BUFFALO COMPANY*"The Jones Interests," Founded 1876*

FRICK BUILDING, . . . PITTSBURG, PA.

DOROTHY AND SARITA MINES

The Dorothy and Sarita mines are located in the well known New River-Kanawha district of West Virginia.

Both mines are new and the equipment and operation are of the same high standing as all our other mines.

"Dorothy Splint" coal is famous over a wide area as the best coal for manufacturing, malleable iron and clay product concerns.

"Sarita Block" coal is particularly prepared for domestic purposes and is of especially fine quality. It is also an excellent gas and coking coal.

These coals contain all the virtues of any other "splint" but excel them all in heat units; burns free and clean to a pure white ash; does not clinker, and produces a long flame making it an ideal coal for clay, cement and malleable iron, in fact for any purpose where a low sulphur fuel is required.

These mines are owned by the Four States Coal and Coke Company. The development and equipment of the property has been under guidance of the "Jones Interest", which also handles the entire output of the mines.

Annual Capacity, 6,000,000 Tons

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Cincinnati

Philadelphia

Buffalo

Youngstown

Detroit

Chicago